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IN THE

Supreme Court of the United States

OCTOBER TERM 1972

NO. 72-1161

GENERAL MOTORS CORPORATION,

Petitioner,

v.

DEVEX CORPORATION, et al.,

Respondents.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE THIRD CIRCUIT

Petitioner, General Motors Corporation, respectfully prays that a writ of certiorari issue to review the judgment entered on September 26, 1972 by the United States Court of Appeals for the Third Circuit.

OPINIONS BELOW

The infringement opinion of the Court of Appeals for the Third Circuit in this case is reported at 467 F.2d 257 (A-54, *infra*)[1]. The conflicting non-infringement opinion of the Court of Appeals for the Seventh Circuit in the case of *Devex* v. *Houdaille Industries* is reported at 382 F.2d 17 (A-20, *infra*). The opinion of the Court of Appeals for the Seventh Circuit holding validity in the previously consolidated case of *Devex* v. *General Motors and Houdaille*

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[1] Citations to the Appendix at the rear of this petition are designated by an "A" page number and "*infra*".

Industries is reported at 321 F.2d 234 (A-13, *infra*). The opinion, findings of fact and conclusions of law of the District Court of Delaware holding no infringement in this case are reported at 316 F. Supp. 1376 (A-39, *infra*).

JURISDICTION

The judgment of the Court of Appeals was entered on September 26, 1972 (A-61, *infra*). A timely petition for rehearing was denied November 29, 1972 (A-63, *infra*) and this Petition For A Writ Of Certiorari was filed within 90 days of that date. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

QUESTIONS PRESENTED

1.

Where a patent monopoly has been upheld solely on the basis of a new and surprising synergistic result occurring under one of many process applications, may the monopoly be expanded thereafter and enforced against other process applications in which such result does not and cannot be shown to occur?

The Court of Appeals for the Third Circuit has held "yes".[2] The Court of Appeals for the Seventh Circuit has held "no".[3]

2.

May a process patent claim which unambiguously defines in broad terms a combination of old elements which are known to the prior art and which, as written, is invalid in

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[2] *Devex* v. *General Motors*, 467 F.2d 257 (3d Cir. 1972) (A-54, *infra.*)

[3] *Devex* v. *Houdaille Industries*, 382 F.2d 17 (7th Cir. 1967) (A-20, *infra.*)

view of the prior art, be held valid by giving the claim a narrow construction limited to a new and surprising synergistic result which is not described in the patent and which occurs only under certain conditions?

CONSTITUTIONAL PROVISION AND STATUTES INVOLVED

This case involves Article I, Section 8, Clause 8 of the Constitution (A-1, *infra*); Section 103 of the Patent Act of 1952, 35 U.S.C. § 103 (A-1, *infra*); and Section 112 of the Patent Act of 1952, 35 U.S.C. § 112 (A-1, *infra*).

STATEMENT OF THE CASE

Claim 4 of reissue patent No. 27,017,[4] here at issue, concerns the old process of applying a lubricant to steel prior to deforming the original shape. For example, automobile bumpers are manufactured by coating the flat steel stock with lubricant and placing it between dies, which are then squeezed together to bend the steel and form the bumper. The lubricant reduces friction and wear on both the steel product and the die, thus serving much the same purpose as soap applied to the finger to remove a ring, or to a wood screw to ease insertion. The three components of the lubricant, and each of the steps of the process, have been used alone and in combinations in the prior art.

The contested patent claim literally recites broad monopoly rights over lubricating processes involved in any

[4] PX 1, Vol. 1. Five volumes of exhibits and seven volumes of a printed appendix which were before the Third Circuit Court of Appeals have been transmitted as part of the certified record to this Court. Hereinafter "Vol." followed by the volume number refers to an exhibit book and "App." followed by the volume number and page number refers to the printed Court of Appeals' appendix.

type of cold steel forming.[5] After the grant of the reissue patent in 1955, the patent holders brought infringement actions against General Motors and Houdaille Industries, making bumpers and other products. These defendants responded by contesting the validity of the claim in light of the prior art.

The Validity Decision Of The Court Of Appeals For The Seventh Circuit

In 1959, *Devex* v. *General Motors* was consolidated with *Devex* v. *Houdaille Industries,* for a trial in the Northern District of Illinois on the common issue of patent validity. The District Court, after hearing, concluded that the claim was invalid as met by the prior art.[6] The court noted plaintiffs' argument that, under certain limited conditions, a chemical reaction of borax with soap and zinc phosphate of the phosphate coating occurred in a new and surprising manner "essential to the successful operation of the process described in claim 4 . . .".[7] It pointed out that these chemical reactions were not disclosed in or suggested in the patent,[8] and held further that the patent claim was void for failure

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Claim 4 recites:

[5] "The process of working ferrous metal which comprises forming on the surface of the metal a phosphate coating and superimposing thereon a fixed film of a composition comprising a solid meltable organic binding material containing distributed therethrough a solid inorganic compound meltable at a temperature below the melting point of the ferrous metal phosphate of said coating and having a hardness not exceeding 5 on the Mohs' hardness scale, and thereafter deforming the metal."

[6] App. 1:261 (A-3, *infra*).

[7] App. 1:243 (A-7, *infra*).

[8] (A-7, *infra.*) The language of Claim 4 is significant in that it says nothing about any coaction of the ingredients or any particular process temperature, pressure, or other conditions, nor does it recite either soap or borax.

to "particularly point out and distinctly claim . . . the invention as required by 35 U.S.C. 112."[9]

On appeal from this finding of patent invalidity, the Court of Appeals for the Seventh Circuit reversed.[10] While confirming the lower court's conclusion that the claim did not state anything other than already available combinations of old elements known to prior art, the Court of Appeals found validity in the "new and unexpected results" which resulted from "coaction" of the elements under certain process applications.[11] Specifically, the court relied upon evidence that under the high pressure and temperatures associated with some tests on steel wire drawing "the abrasive phosphate coating reacts with the borax to form amorphous glassy materials which contribute significantly to the lubricating value of the coating."[12] These synergistic effects, which occurred only under certain conditions, were held adequate to validate the patent.[13]

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[9] App. 1:260, 261 (A-8, 11, *infra*).

[10] *Devex Corp.* v. *General Motors and Houdaille*, 321 F.2d 234 (1963) (A-13, *infra*).

[11] The Court of Appeals in part justified this result by holding that patent claims may be "generic in character and do not necessarily have to be specific". 321 F.2d at 238 (A-17, *infra*).

[12] In the tests, phosphate coated steel wire rods having an initial diameter of about one-fourth of an inch were drawn through two dies in succession. Each die reduced the cross-section area about 20 percent, giving a total reduction of about 40 percent. (App. 3:917-19) No metal bending, such as in the bumper forming process now accused, was involved. The lubricant used over the phosphate coating was 50 percent borax (App. 3:913-14) rather than the 5 percent borax and 15 percent borax in the lubricants used in the presently accused processes. (n. 23, *infra*).

[13] This Court denied the ensuing Petition for Certiorari, 375 U.S. 971. It was opposed by Devex, *inter alia*, on the ground that the judgment of the Seventh Circuit was interlocutory.

The Non-Infringement Ruling Of The Court Of Appeals For The Seventh Circuit

Following the Seventh Circuit reversal on the issue of validity, the *Houdaille* and *General Motors* cases followed separate courses.

In the *Houdaille* case, plaintiffs brought a motion for summary judgment of infringement, on the sole ground that Houdaille had successfully used soap, borax and phosphate metal deforming processes to make bumpers. There were issues of fact on whether Houdaille's method produced the unexpected results referred to in the validity decision. Notwithstanding, since the process was literally within the language of the claim which the Court of Appeals had held valid, the District Court believed itself bound and granted plaintiff's motion.[14] On appeal, the Seventh Circuit reversed,[15] again recognizing that the claim if read literally would be invalid,[16] and emphasizing that "our previous decision [on validity] requires that the claim in suit be given a narrow and restricted construction.[17]

The Court of Appeals added that the plaintiffs "having obtained a decision of validity on a narrow and restricted basis . . . now contend, inconsistently we think, that the claim must be applied literally to defendant's alleged infringing process."[18] The Court then stated that:

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[14] 148 USPQ 74, 77 (1965).

[15] *Devex* v. *Houdaille Industries,* 382 F.2d 17 (1967) (A-20, *infra*).

[16] "The 'new and unexpected result' which plaintiffs urged upon this Court in their argument in behalf of validity, to which we gave recognition, certainly was not revealed by a literal reading of Claim 4. In fact, we can surmise with some assurance that if a literal reading of the claim had been relied upon, we would have affirmed the District Court in its holding of invalidity in view of the prior art." 382 F.2d at 23 (A-26, *infra*).

[17] 382 F.2d at 22 (A-25, *infra*).

[18] 382 F.2d at 22, 23 (A-25, 26, *infra*).

"Such a construction would monopolize the whole broad field of metal forming with any use of a dry soap and borax over phosphate at any temperature or pressure, regardless of the results." 382 F.2d at 23 (A-26, *infra*)

The Seventh Circuit held that in order to prevail, the plaintiffs must carry the burden of proving that the same new and surprising result would have been obtained in the drawing of defendant's alleged infringing automobile bumpers.[19] It found that there was an issue of fact on this matter. Indeed, it noted that "in the instant case, as in General Motors, there is evidence that the patentee's process recognized by this Court required 'extreme temperatures and pressure of from 100,000 to 250,000 pounds Hertz stress,'" and that "the (Friedberg) tests relied upon (to hold validity) were made in the drawing of wire rods."[20]

In short, the Seventh Circuit held that plaintiffs could not successfully prosecute infringement claims without proving that the accused processes were under conditions producing the same chemical coaction or synergistic result upon which the finding of validity had been based.

The Infringement Ruling Of The Court Of Appeals For The Third Circuit

After the Seventh Circuit ruling on validity, the *GM* case was transferred to the District of Delaware, where the plaintiffs brought a similar motion for summary judgment on the infringement issue as in the *Houdaille* case. Unlike the Chicago District Court, the Delaware District Court denied the motion, finding that there was an issue of fact as to whether the GM processes had the unexpected results upon which the Seventh Circuit had sustained validity.[21]

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[19] 382 F.2d at 23, 24 (A-26, 27, *infra*).
[20] 382 F.2d at 23 (A-26, *infra*).
[21] 263 F. Supp. at 25 (A-29, 37, *infra*).

Judge Caleb Wright stated:

> ". . . the construction of a claim when its validity is contested controls the construction of that same claim when its infringement is alleged. The patentee cannot urge a restrictive interpretation of his claim to avoid invalidity and then an expansive interpretation to ensnare infringers". 263 F. Supp. at 25 (A-37)[22]

In the subsequent infringement trial, plaintiffs attempted to prove that the accused GM processes[23] employed temperature and pressure conditions which produced the same chemical coaction and synergism as had been relied upon by the Seventh Circuit in holding validity. Defendant adduced contrary evidence.

On the basis of detailed findings of fact, the District Court held for defendant, concluding that no infringement had been shown.[24] The court held that plaintiffs had the burden

> "to prove that a coaction occurs in the accused processes among the soap, borax and phosphate at high temperatures and pressures, causing new compounds, including but not limited to glassy amphorous compounds, to be formed, and inhibiting the formation of water insoluble compounds."[25]

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[22] This statement was quoted with approval by the Court of Appeals for the Seventh Circuit in its Houdaille non-infringement opinion. 382 F.2d at 23 (A-26, *infra*).

[23] The processes here accused are the Pontiac "bumper forming" process, the Diesel Equipment "valve lifting plunger process" and the Pontiac "rocket forming" process (A-43 to 46, *infra*). The first process used "Bonderlube 246", containing 15% borax and 85% soap. The last two processes used "Bonderlube 235", containing 3% borax, 2% sodium nitrite, and 85% soap. (Id.). None of the three processes involved any form of wire drawing, as was used in the tests relied upon in the validity holding, nor did they use 50% borax.

[24] 316 F. Supp. 1376 (A-39, *infra*).

[25] A-41, *infra*. Judge Wright, in the earlier motion ruling denying summary judgment of infringement, held that defendant was bound by the Seventh Circuit ruling on validity (263 F.Supp. at 25), a holding which was affirmed by the Court of Appeals for the Third Circuit, 467 F.2d at 262 (A-59, *infra*).

and concluded that plaintiffs had failed to carry that burden.

The Court of Appeals for the Third Circuit did not disturb these or any other underlying findings of fact. But it nevertheless reversed. It did so by applying a standard squarely rejected by the Seventh Circuit and the District Court of Delaware. It stated that:

> "if it is directly determinable that if the two lubricants have essentially the same components, are applied in the same way and that the results of their use are essentially the same, the disputation of chemists about the chemical interactions that occurred in the processes cannot be decisive."[26]

Only by ignoring the fact that it was precisely such "chemical interactions" that prompted the previous holding of patentability was the Third Circuit able to conclude that:

> "In these circumstances, the demonstrated effectiveness of GM practice in producing a satisfactory drawing and ease of cleaning that Hendricks had achieved must prevail over any contrary inference drawn from disputed expert testimony as to comparative chemistry in what may well not have been equivalent situations."[27]

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[26] 467 F.2d at 261 (A-58, *infra*).

[27] Id. at 262 (A-59, *infra*). The Court appears to have regarded satisfactory results as sufficient to demonstrate patent infringement. This is not the law. A result (or function) is not patentable. *United Carbon Co.* v. *Binney and Smith Co.*, 317 U.S. 228, 234 (1942). Where, as here, there is a combination of old elements, patentability rests on the existence of coaction or synergistic effect. *Anderson's Black Rock* v. *Pavement Salvage Co.*, 396 U.S. 57, 61-3 (1969). The Seventh Circuit based its holding of validity on the presence of coaction. The only coaction alleged in the present case is the chemical coaction, the only way to prove such coaction is by chemical testimony, and the undisturbed fact findings below are that such coaction did not occur in the accused processes.

Nowhere did the Third Circuit deal with the crucial fact finding[28] that plaintiffs had failed to prove that the GM process possessed the "new and unexpected coaction" which had formed the sole basis for the earlier finding of patent validity.

In effect, the Third Circuit ruled that where a process patent is given limited validity by a holding based solely on coaction not described in the claim, and to which the claim is not limited, the patentee may nevertheless enforce its patent monopoly against other processes within the claim's unspecific language, even where such coaction has not been shown to occur.

REASONS FOR GRANTING THE WRIT

Question No. 1

This question presents a highly significant and increasingly important issue concerning the scope and reach of the patent monopoly, as to which a clear conflict[29] exists between the Third Circuit and the Seventh Circuit. In its validity decision in the consolidated case, the Seventh Circuit found validity because of synergistic coaction. After separation of the cases, the Seventh Circuit in *Houdaille* held that the allegedly infringing process must achieve the same synergistic coaction upon which patent validity was sustained, thus giving the claim the same limited construction on infringement as on validity. However, the Third Circuit in

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[28] Findings of Fact 10-14, 316 F.Supp. at 1383-1389 (A-46 to 52, *infra*).

[29] In *Universal Oil Products Co.* v. *Globe Oil & Refining Co.*, 322 U.S. 471 (1944), this Court granted certiorari to resolve a conflict between Courts of Appeals which as to the same patent and upon substantially the same facts reached conflicting conclusions as to infringement. See also *Weber Electric Co.* v. *Freeman*, 256 U.S. 668 (1921) where a similar conflict between circuits on infringement was resolved.

the present case has given the patent a broader scope insofar as enforcement is concerned, holding that there was infringement by a process in which the requisite synergistic coaction was not shown.

Unless the decision is reversed, the Third Circuit will have extended the patentee's monopoly to processes not providing the critical chemical coaction and synergism upon which validity was based. Simply stated, the court below has enforced a patent monopoly, held valid only as to a specific process, against a different process which has not been held patentable.

The result is to prohibit the public from free use of unpatentable processes.

> "The function of a patent is to add to the sum of useful knowledge. Patents cannot be sustained when, on the contrary, their effect is to subtract from former resources freely available to skilled artisans." *A&P Tea Co.* v. *Supermarket Corp.*, 340 U.S. 147, 152 (1950)

Citing *A&P*, the Court of Appeals for the Seventh Circuit found patent validity only by concluding that a particular process displayed the requisite coaction and synergistic result.[30] May the Third Circuit below, after this limited decision, now vitiate the entire doctrine of *A&P* by finding infringement through a combination of old elements which do not achieve the requisite coaction and synergistic result? The effect of the decision below is illogically to limit the *A&P* doctrine to validity and not to infringement.

The decision below clearly destroys the traditional congruence between the concepts of validity and infringement. As a logical necessity, no process may infringe a patent claim unless such process would itself have been patentable

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[30] 382 F.2d at 22 (A-25, *infra*).

under the same principles which sustained the validity of the existing patent. This cardinal principle has been ignored by the court below.

The only other way to explain the decision is that the court below while paying lip service to the proposition that the validity of the patent claim was not to be relitigated, in fact *sub silentio* relitigated the validity of the patent which had been previously determined by the Seventh Circuit. By disregarding the findings of the District Court that the plaintiffs had failed to prove that the accused processes embodied the chemical coaction and synergism which had formed the basis for the earlier finding of validity, the Third Circuit has in effect held petitioner liable for infringement of a process the validity of which petitioner never had the opportunity to contest.[31]

In *Blonder-Tongue Labs* v. *University of Illinois*, 402 U.S. 313 (1971), this Court held that a ruling of patent invalidity, once made, is binding in all future cases on the patent. The same necessarily applies to a ruling of narrow and limited validity. In the present case, the Seventh Circuit twice made clear that the claim was invalid if construed as written, but was only valid in a much narrower context. Consequently, the plaintiffs were estopped under *Blonder-Tongue* to assert a broader claim construction and in effect relitigate validity. Yet, the court below adopted a significantly broader construction in order to sustain its finding of infringement—a construction that disregards the critical aspects which prompted the Seventh Circuit to find the patent valid.

Other decisions by this Court also point to the proper resolution of this question. In *Smith* v. *Hall*, 301 U.S. 216, 220

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[31] The Delaware District Court had previously refused to relitigate the validity of the patent, 263 F.Supp. at 19-24 (A-29, 31-37, *infra*).

(1937), an infringement ruling whereby the claim was broadly construed preceded the validity consideration before this Court. This Court held that the patentee was foreclosed from asserting a new and more narrow patent scope to save the patent from invalidity. In the "file wrapper estoppel" cases, exemplified by *Exhibit Supply Co.* v. *Ace Patents Co.*, 315 U.S. 126 (1942), this Court has held that patentees are strictly limited by the claim amendments they insert in the Patent Office to procure claim allowance over the prior art. The reasoning of these cases would seem to apply where, as here, the infringement ruling follows the validity decision and where, as here, the basis of upholding patent validity is a surprising coaction not set forth in the claim, as distinguished from one that is formally inserted into the claim to procure allowance.

It follows that when the validity ruling has been made first, the patentee must live within that determination in pressing his monopoly rights in subsequent infringement claims. It is true that this Court has never specifically so ruled. But, as the present case so graphically demonstrates, such a decision is necessary to make clear that where process patent claims are narrowed beyond their terms in court proceedings in order to save their validity, that determination must be binding in subsequent proceedings to enforce the patent against a process accused of infringing. Otherwise, a patent holder achieves a monopoly over that which has been previously held unpatentable.

Decisions of this Court in the past three decades, particularly those since the 1952 Patent Code, make it crystal clear that a patent to a combination of old elements stands or falls on the existence or non-existence of a surprising coaction or synergistic effect. Most patents are directed to such combinations. Indeed, the last five patent validity

rulings[32] of this Court each pertain to such a patent. But this Court has not ruled that the same surprising coaction or synergistic effect must be applied to find infringement as has been applied to find validity or even, more broadly, that patent infringement must be determined by the same strict standard as is patent validity. Absent such ruling, a decision of patent validity may arm the patent owner with a power to expand the monopoly and charge as an infringement acts that would have failed the test of patent validity. Such ruling is clearly needed, as the present conflict between the Third Circuit and the Seventh Circuit on the same patent demonstrates.

Question No. 2

The validity decision of the Seventh Circuit is a substantial departure from the law pertaining to patent specifications and claims, and should be reviewed by this Court.[33] It conflicts with decisions rendered by the Second and Fifth Circuits and is analogous to the decision of the Sixth Circuit in *Noll* v. *O. M. Scott & Sons Co.*, 467 F.2d 295 (6th Cir. 1972), now before this Court on Petition for Certiorari.

In the present case, the Seventh Circuit, in considering 35 USC § 112, recognized the unspecific character of the claim. It excused this deficiency stating that "patent claims should be generic in character and do not necessarily have

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[32] *A&P Tea Co.* v. *Supermarket Corp.*, 340 U.S. 147, 152 (1950); *Graham* v. *John Deere Co.*, 383 U.S. 1 (1966); *Calmar, Inc.* v. *Cook Chemical Co.*, 383 U.S. 26 (1966); *United States* v. *Adams*, 383 U.S. 39 (1966); *Anderson's Black Rock* v. *Pavement Salvage Co.*, 396 U.S. 57 (1969).

[33] The judgment of the Court of Appeals for the Seventh Circuit is open to present review by this Court. *Hamilton-Brown Shoe Co.* v. *Wolf Bros. & Co.*, 240 U.S. 251, 257-8 (1915).

to be specific"[34]. But the court inconsistently upheld the claim only because it treated the claim as if it were limited to specific ingredients and particular conditions of temperature and pressure which achieved the new and surprising synergistic result. Indeed, the court has specifically stated that it gave the claim "a narrow and restricted construction" in order to find validity.[35] This restricted construction apparently ignored the Chicago District Court's unreversed findings that "the patent does not describe any chemical reactions,"[36] that some ingredients within the claim are not workable,[37] and that the prior art "British patent 494,830 . . . contains disclosure of a lubrication composition for drawing and deforming ferrous metal within the broad terminology employed in Claim 4 of the patent in suit".[38] In short, the Seventh Circuit Court of Appeals completely rewrote Claim 4 to fit its own concept of what the invention should be and failed to determine what the patentee actually claimed as required by 35 USC § 112.[39]

The ruling of the Court of Appeals of the Seventh Circuit is in conflict with that of the Second Circuit in *Carter-Wallace* v. *Otte,* F.2d , 176 USPQ 2, 9-12 (1972). There, the broadly claimed chemical compound was obvious in view of the prior art. Carter-Wallace sought to avoid a holding of patent invalidity on the ground that the compound had unexpected tranquilizing properties which, however, were not described in the patent specification. The Court of Appeals for the Second Circuit rejected the patentee's argument. It held that the "novel, unexpected, or superior non-obvious property must be disclosed in the

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[34] 321 F.2d at 238 (A-17, *infra*).
[35] 382 F.2d 22 (A-25, *infra*).
[36] (A-7, *infra*).
[37] (A-5, *infra*).
[38] (A-7, *infra*).
[39] (A-1, *infra*).

patent application in order to be relied upon as a basis for patentability."[40] In contrast, the Court of Appeals for the Seventh Circuit in the present case has held the patent valid because of unexpected synergistic coaction even though nowhere described in the specification.

Moreover, the Seventh Circuit decision fails even to require that the claim state the ingredients with specificity. In *Graver Tank & Mfg. Co.* v. *Linde Air Products*, 336 U.S. 271, 276-7 (1949), this Court rejected patent claims because of such lack of specificity. The claims there unambigously recited "silicates", but some of the silicates were not operative. The Court of Appeals for the Seventh Circuit had sustained the patent by limiting the claims to the operative silicates. *Linde Air Products* v. *Graver Tank*, 167 F.2d 531, 537-8 (1948). This Court held that the claims could not be saved by construing them narrowly to cover only those silicates that had proved operative. It held that claims "fail . . .to perform their function as a measure of the grant when they overclaim the invention", and that the Court of Appeals for the Seventh Circuit[41] had erred in its view that claims could be sustained by limiting them to operative silicates.[42]

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[40] Similarly, the Fifth Circuit in *Beckman Instruments* v. *Chemtronics, Inc.*, 439 F.2d 1369 (1970) held that the court's discretion to construe narrowly the patent claim in order to avoid the prior art is limited by the claims the patent actually makes. The court stated: "The claims of Clark's patent are not, however, limited to any set of materials that produce any specific synergistic result . . . They cannot be read to be further limited. It is this fact, not want of invention, that invalidates the patent." (439 F.2d at 1374)

[41] 167 F.2d at 538.

[42] In *U.S.* v. *Adams*, 383 U.S. 39, 49 (1966) this Court sustained a claim to a battery despite its failure to specify water as the electrolyte. This Court noted that "taken together with the stated object of disclosing a water-activated cell, the lack of reference to any electrolyte in Claims 1 and 10 indicates water alone could be used."

The law on limiting patent claims to save patent validity is now completely unsettled. The Court of Appeals for the Seventh Circuit, despite *Graver Tank*, has reverted to the view that claims need not be specific. The Court of Appeals for the Sixth Circuit in *Noll*, supra, has reached the same result by relying upon the changes made when Section 112 of the 1952 Patent Code replaced the prior statute. The Court of Appeals for the Fifth Circuit, however, has adopted the opposite view and has narrowly viewed the extent claims can be limited to preserve validity.[43] And the Court of Appeals for the Second Circuit, contrary to the ruling of the Seventh Circuit in the present case, has held that unexpected results not described in the patent specification cannot be relied upon to save validity.[44]

We submit that this Court should grant certiorari on the second question here presented and on the same question in the *Noll* case, and reexamine this important subject in the light of the statutory requirement that the patent "particularly point out and distinctly claim" the invention (35 USC § 112).

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[43] *Beckman, supra.*

[44] *Carter-Wallace, supra.*

CONCLUSION

For the reasons stated, this Petition for Certiorari should be granted.

Respectfully submitted,

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APPENDIX

Constitution

United States Constitution, Art. I, § 8, Cl. 8

The Congress shall have Power • • • To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.

UNITED STATES CODE, TITLE 35:

§ 103. Conditions for Patentability; Non-Obvious Subject Matter

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made. July 19, 1952, c. 950, § 1, 66 Stat. 798.

§ 112. Specification

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specifications and equivalents thereof. July 19, 1952, c. 950, § 1, 66 Stat. 798.

HISTORICAL AND REVISION NOTES

Reviser's Note. Based on Title 35, U.S.C., 1946 ed., § 33 (R.S. 4888 [derived from Act July 7, 1870, c. 230, § 26, 16 Stat. 201], amended (1) Mar. 3, 1915, c. 94, § 1, 38 Stat. 958; (2) May 23, 1930, c. 312, § 2, 46 Stat. 376).

* * *

The clause relating to the claim is made a separate paragraph to emphasize the distinction between the description and the claim or definition, and the language is modified.

A new paragraph relating to functional claims is added.

Prior Law. For prior law on the subject of this section, see former section 33 of this title, set out in Appendix II at the end of this title.

Portions Of Opinion And Findings Of Fact And Conclusions Of Law In

Devex Corporation et al v. General Motors Corporation and Houdaille Industries

(Judge Edwin A. Robson, N.D. Illinois, February 1, 1962)

DECISION ON MERITS ON VALIDITY OF CLAIM 4 OF REISSUE NO. 24,017

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It is the Court's conclusion that Claim 4 of the reissue patent is invalid as anticipated by prior patents, prior use, and prior publications. The United States patents to Singer, Orozco and Whitbeck, the British patents, the 1943 runs at Briggs Manufacturing Company, and the German publications considered together reveal the phosphate coatings on metals to be drawn, in conjunction with lubricants, some co-acting with the phosphate coating. While it is arguable that the precise combination and co-action indicated by the patent are not found verbatim in the prior art, one armed with the knowledge of a worker skilled in that field could, the Court believes, have achieved the result covered by Claim 4 of the reissue patent. Furthermore, the breadth and indefiniteness of proportions of the elements of that claim[3] preclude a holding of its validity in view of the knowledgeable prior art,[4] in view of the disclosures of the specifications, and unwarranted monopolizing of the field of use of borax and soap.[5]

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[3] The specifications state that borax is to be used in the proportions of *two to five times the amount of soap.*

[4] There is no specification, disclosure or limitation in Claim 4 of the amount or proportions of solid inorganic compound (borax) or solid meltable organic binding material (soap).

[5] *O'Reilly, et al.* v. *Morse, et al.*, 56 U.S. 65 (1853); *Holland Furniture Company* v. *Perkins Glue Company*, 277 U.S. 245 (1928); *The Incandescent Lamp Patent*, 159 U.S. 465 (1895); *General Electric Co.* v. *Wabash Appliance Corp., et al.*, 304 U.S. 364 (1938); *United Carbon* v. *Binney & Smith Co.*, 317 U.S. 228 (1942).

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Defendants contend that a patentee may not compel independent experimentation by others to ascertain the bounds of the claims[12] and a patentee may not by claiming a method broadly in terms of a result or function, foreclose all means and ways of practically obtaining such result or objective.[13] Substitution of one material for another of the same class in an old combination does not constitute invention.[14] The broadness of a claim such as Claim 4, defendants assert, has long been condemned.[15]

On the other hand, patentable invention is claimed by plaintiffs in that it is asserted that Henricks' patented process, although using old elements, achieves new and surprising results, or, stated differently, the whole exceeds the sum of the parts.[16]

They frankly concede that all the elements of the Henricks' invention were old, but urge they were put together in a new way, resulting in new and unpredictable results

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[12] *Standard Oil Company of California* v. *Tide Water Associated Oil Co.*, 154 F.2d 579 (3rd Cir. 1946).

[13] *National Carbon Co., Inc.* v. *Western Shade Cloth Co.*, 93 F.2d 94 (7th Cir. 1937).

[14] *Johnson Laboratories, Inc.* v. *Meissner*, 98 F.2d 937 (7th Cir. 1938).

[15] *O'Reilly, et al.* v. *Morse, et al.*, 56 U.S. 61 (1853); *Holland Furniture Company* v. *Perkins Glue Company*, 277 U.S. 245 (1928); *The Incandescent Lamp Patent*, 159 U.S. 465 (1895); *General Electric Co.* v. *Wabash Appliance Corp., et al.*, 304 U.S. 364 (1938); *United Carbon Co.* v. *Binney & Smith Co.*, 317 U.S. 228 (1924).

[16] *Great Atlantic & Pacific Tea Co.* v. *Supermarket Equipment Corp.*, 340 U.S. 147 (1950); *Lewyt Corporation* v. *Health-Mor, Inc. et al.*, 181 F.2d 855 (7th Cir. 1950); *Blaw-Knox Company* v. *I. D. Lain Company, Inc.*, 230 F.2d 373 (7th Cir. 1956); *The Mojonnier Dawson Company* v. *U.S. Dairies Sales Corporation*, 251 F.2d 345 (7th Cir. 1958); *Armour & Co.* v. *Wilson & Co., Inc.*, 274 F.2d 143 (7th Cir. 1960); *Donner* v. *Sheer Pharmacal Corporation*, 64 F.2d 217 (8th Cir. 1933).

and reactions. They emphasize that Claim 4 uses a phosphate coating (the abrasive coating of the Singer process), seemingly a retrogression in the art; a *fixed* overlying film of which the solid meltable organic constituent is soap and a meltable inorganic compound (Borax) distributed therethrough, meltable at a temperature below the melting point of the abrasive phosphate coating and having a hardness not more than 5 on the Mohs' scale.

The "amazingly efficient" and "remarkable" results claimed by plaintiffs from the Henricks' patented process is that "the surface of the product is improved, product dimensions are maintained with consistency, tool life is lengthened, and the practical limits of the shaping operation are extended." Further, the "formation of insoluble or difficultly-soluble deposits on the drawn metal is inhibited, such as zinc stearate. Instead of the phosphate coating reacting with the soap to form insoluble abrasive compounds, the phosphate reacts with the borax to form amorphous, glassy materials which contribute significantly to the lubricating value of the coating and assist in the drawing operation and yet, amazingly do not present any problem of cleaning." The process results in articles of "superior quality at lower cost." Defendants, on the other hand, deny any unexpected or surprising co-action or results by the use of soap-borax lubricants over phosphate. They note that there is no substantial difference in the rods introduced in evidence, drawn only with phosphate coating and with soap, and with soap and borax.

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The Court concludes that Claim 4 of the Reissue Patent No. 24,017 is invalid for several reasons.

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The claim does not specify the kind of phosphate coating, the kind of meltable organic binding, and the kind of solid inorganic compound to be utilized, as well as not specifying

the amounts and relative proportions of any such items. As defendants' proof showed, some processes could be conceived of ingredients of those classes which would not be workable.

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FINDINGS OF FACT AND CONCLUSIONS OF LAW ENTERED PURSUANT TO THE COURT'S DECISION ON MERITS ON VALIDITY OF CLAIM 4 OF REISSUE NO. 24,017

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6. (a) It was well known in the art prior to the patent in suit on April 29, 1946, that it was a definite improvement and aid in cold drawing and deforming steel to provide the surface of the steel with integral phosphate coatings and apply lubricants over such coatings.

(b) The use of zinc phosphate coatings to which oil is applied as a lubricant in drawing and deforming steel tubes is disclosed in Defendant's Exhibit 42, British patent 496,866 of 1938.

(c) The drawing and deforming of steel provided with manganese phosphate coatings impregnated with oil or fat or a mixture of oil and fat as a lubricant is disclosed in Defendant's Exhibit 41, British patent 494,830 of 1938.

With respect to lubricants that had been known for use in drawing operations, this patent also discloses (column 1, lines 14-22):

> "It is known to treat iron pipes, in particular, prior to a drawing process, with fats or oils, or to precipitate deposits thereon, in order to soften the surface and to reduce the wear on the drawing tools. It has also been the practice to mix the oil or fat with pulverulent substances, such as talc or litharge, for the purpose of increasing its efficiency."

The fats disclosed in this patent include fats such as tallows, of which many are known to be solid at room temperature, and the litharge (lead oxide), which the patent states it had been the practice to mix with the oil or fat for the purpose of increasing its efficiency. There is thus disclosed a composition providing a solid meltable organic binding material (namely, fats known to be solid at room temperature) containing distributed therethrough a solid inorganic compound (namely, the litharge) meltable at a temperature below the melting point of ferrous metal and having a hardness not exceeding 5 on Mohs' hardness scale, all within the definition of the corresponding language employed in claim 4 of the patent in suit. Lead oxide (litharge) is specifically listed in the patent in suit, column 9, Table I, under fusible pigments suitable for use as a solid inorganic compound meltable at a temperature below the melting point of ferrous metal phosphate and having a hardness not exceeding 5 on Mohs' hardness scale, called for by the corresponding language in claim 4 of the patent in suit (Gibson R. 617-623).

The British patent 494,830 therefore contains disclosure of a lubricating composition for drawing and deforming ferrous metal within the broad terminology employed in claim 4 of the patent in suit.

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12. Plaintiffs alleged at trial that compounds other than zinc phosphate and the borax are formed by chemical reaction of the borax with soap and the zinc phosphate of the phosphate coating, and are essential to the successful operation of the process described in claim 4 of the patent in suit.

The patent in suit does not describe any chemical reactions in the drawing operations with soap-borax applied over phosphate coatings which produce or require the production of any other compounds to be essential to successful drawing operations; claim 4 of the patent in suit con-

tains no reference to or requirement of the presence of such other compounds in the operation of the process defined by the claim.

The other compounds alleged to be produced by a chemical reaction of the borax in the coating and the phosphate of the coating were not identified with certainty by or in the X-ray diffraction patterns produced, Plaintiffs' Exhibits 22, 23, 24 and 25 (R. 191-210, 543-558).

It was admitted that no quantitative values or amounts of the compounds alleged to have been formed by chemical reaction of the borax and alleged to be present could be determined from the X-ray diffraction patterns (R. 243-245). There is no evidence that the compounds alleged to have been formed by chemical reaction of the borax and to have been present in the samples tested were present in any significant quantity or had an controlling or significant effect in the drawing operations.

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27. The evidence establishes that in 1943 and for more than two years prior to the time, April 29, 1946, the date relied upon by plaintiffs in this case for the making of the invention of claim 4 of the patent in suit, the differences between the subject matter sought to be patented in claim 4 and the prior art were such that the subject matter as a whole would have been and was obvious to persons having ordinary skill in the art of drawing and deforming steel.

28. Claim 4 of the patent in suit is indefinite and fails to particularly point out and distinctly claim, as required by the Patent Act, 35 U.S.C. Section 112, the subject matter which applicant regards as his invention.

With respect to the use of borax as the solid inorganic compound of the claim, in answer to defendant's interrogatory 16:

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"State the minimum and the maximum proportions of borax and soap that plaintiffs will contend at the

trial of this cause to be within the scope of the said claim 4 of said reissue patent."

plaintiffs answered as follows:

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"Plaintiffs will make no contentions and cannot speculate as to the minimum and maximum proportions of borax and soap which might be within the scope of claim 4 of Reissue Patent No. 24,017 because all circumstances must be evaluated and considered. "

At the trial the patentee Henricks speculates (R. 468-504) with vague references to unidentified literature regarding mineralogy and cosmetics, without being able to define any minimum or maximum amount of borax required, and his final summation of the matter leaves the question wholly indeterminate and indefinite (R. 501, 503, 504).

Claim 4 says nothing whatever about the amounts or proportions of "solid meltable organic binding material", or the amounts or proportions of "solid inorganic compound".

As written, the claim includes as "solid meltable organic binding material" all of the multitude of compounds mentioned in the patent and others that could be selected from the tables and literature which could be regarded as organic —capable of becoming solid—and meltable. It is alleged in this case to include also sodium stearate soap, which is listed in the standard chemical handbooks as an *inorganic* material (Dr. Gibson, R. 794-796, 803-808, 810-812).

As written, the claim includes as "solid inorganic compound" all compounds listed in column 9, Table I—Fusible Pigments, in the patent in suit, which could be selected from the tables and literature and which would melt below the melting point of ferrous phosphate and have a hardness less than 5 on the Mohs' hardness scale.

The claim contains no limits or instructions as to the proportions of such compounds that would be operable to carry out the alleged process invention stated by the claim.

The claim does not specify or call for the alleged mineralizing, metamorphizing or fluxing of the phosphate of the coating to form glass, or for the alleged emulsifying of the residual coating or film left after drawing.

There is no evidence that all of the materials includable within the terminology of the claim would perform the alleged functions.

No one could determine otherwise than by extensive experiments whether all or how many of the compounds includable within the terminology employed could be used, or in what mixtures or proportions they could be used, nor whether they would accomplish the alleged mineralizing, metamorphizing or fluxing.

The claim does not particularly point out and distinctly claim the alleged invention, i.e., emulsifying, or mineralizing, metamorphizing and fluxing, that Henricks (R. 421) states he swore the oath to. All such matter was cancelled from the application for the patent (Finding 13).

Henricks considers sulfur to be an inorganic pigment within the terminology of claim 4, and admits that it performs none of the alleged glass forming mineralizing functions of borax, and is of no help in cleaning effect (R. 513-514).

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CONCLUSIONS OF LAW

1. Claim 4 of the patent in suit Re. 24,017 is invalid:

(a) On the ground of lack of lawfully patentable invention in view of the prior art known and practiced at and before the time the alleged invention of claim 4 was made;

(b) On the ground that the process of claim 4 was known to and used by others before the applicant for the patent in suit claims to have made the discovery or invention thereof;

(c) On the ground that the patentee did not invent the subject matter purported to be described in claim 4 but merely adopted a process which, in view of the prior art and practice known in 1943, was obvious and known to persons familiar with and skilled in the art of drawing metal;

(d) On the ground that claim 4 defines merely an aggregation of process steps that were separately old and well known and that when combined produce no new, unexpected or unobvious result.

(e) On the ground that claim 4 fails to meet the requirements of the Patent Act, 35 U.S.C. Section 112, in failing to particularly point out and distinctly claim subject matter which the patentee regards as his invention, or subject matter for which the patentee is lawfully entitled to Letters Patent.

2. That the complaints filed herein be dismissed for want of cause for action.

s/ Edwin A. Robson
United States District Judge

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DEVEX CORPORATION et al., Plaintiffs-Appellants,

v.

GENERAL MOTORS CORPORATION et al., Defendants-Appellees.

No. 13979.

United States Court of Appeals Seventh Circuit.

July 12, 1963.

Rehearing Denied Sept. 4, 1963.

Suit for infringement of reissue patent No. 24,017 relating to lubrication of metal surfaces in cold drawing and forming operations. The United States District Court for the Northern District of Illinois, Eastern Division, Edwin A. Robson, J., rendered a judgment holding the only claim in issue invalid and plaintiff appealed. The Court of Appeals, Duffy, Circuit Judge, held that the claim was valid and was not invalid as being too broad and lacking in specificity, as adoption of process which was obvious to person skilled in art or on grounds of public use.

Reversed.

1. Patents ⇐101(6)

That claim distinguished from 31 references in mature art, none of which anticipated, clearly established that it was not too broad and indefinite. 35 U.S.C.A. § 112.

2. Patents ⇐101(5)

Patent claims should be generic in character and do not necessarily have to be specific.

3. Patents ⇐118.21

Statutory presumption of validity of patent is not overcome except by clear and cogent evidence. 35 U.S.C.A. § 282.

4. Courts ⇐406.3(16)

Where evidence relied upon in adjudicating validity of patents appeared in depositions, Court of Appeals was in as good position as trial court to examine it and determine whether its use was public use.

5. Patents ⇐62(3)

To invalidate patent on ground of public use, prior public use must be established by clear and convincing proof.

6. Patents ⇐328

Claim No. 4 of reissue patent No. 24,017 relating to lubrication of metal surfaces in cold drawing and forming operations was valid, and was not invalid as being too broad and lacking in specificity, as adoption of process which was obvious to person skilled in art or on grounds of public use.

Frank H. Marks, Chicago, Ill., William C. McCoy, Jr., Cleveland, Ohio, Walter J. Blenko, Pittsburgh, Pa., for appellant.

Arthur W. Dickey and Neal A. Waldrop, Detroit, Mich., for defendant General Motors Corporation.

Benjamin H. Sherman, Carlton Hill, Chicago, Ill., for defendant-appellee, Houdaille Industries, Inc.

George N. Hibben and Jerome F. Fallon, Chicago, Ill., for other appellees.

Before DUFFY and SWYGERT, Circuit Judges, and MAJOR, Senior Circuit Judge.

DUFFY, Circuit Judge.

These are two civil suits for infringement of Henricks' Reissue Patent No. 24,017 which were consolidated for trial on the common issue of validity. Claim 4 is the only claim at issue.[1] The District Court held Claim 4 of the patent in suit

1. Claim 4 reads:

"4. The process of working ferrous metal which comprises forming on the surface of the metal a phosphate coating and superimposing thereon a fixed film composition comprising a solid melt- [illegible] binding material containing distributed therethrough a solid inorganic compound meltable at a temperature below the melting point of the ferrous metal phosphate of said coating and having a hardness not exceeding 5 on the Mohs' hardness scale, and thereafter deforming the metal."

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to be invalid in view of the indefiniteness of the claim, the prior art and prior public use.

The patent in suit relates to lubrication of metal surfaces in cold drawing and deforming operations in shaping steel to desired forms by dies, to reduce friction between the steel workpiece being drawn or shaped and the die, to avoid scoring and tearing of the metal being drawn and to avoid injury to the surface of the dies.

The patent in suit is the outcome of an application, Serial No. 665,905, filed April 29, 1946 by the patentee Henricks, which was abandoned in favor of a continuation-in-part application filed October 31, 1950, upon which was issued United States Patent No. 2,588,234, dated March 4, 1952, for which application for reissue was filed March 1, 1954, upon which Re. Patent No. 24,017 now in suit issued on June 7, 1955.

Claim 4, the only claim in issue, is identical to Claim 45 as allowed by the Patent Office in the 1946 application. April 29, 1946, the date when the 1946 application was filed, is therefore the record date of invention to which the patentee is entitled.

The patent in suit relates particularly to the lubrication of metal for drawing and forming operations. It concerns cold forming operations as opposed to hot forming operations. When metal is drawn or deformed, to transform a blank or workpiece into another desired shape, there is necessarily some movement between the surface of the blank and the surface of the die, and an accompanying generation of high pressures and temperatures. Adequate lubrication is essential. Unless suitable provision for lubricating the surfaces is made, tearing of the metal or galling of the dies results. The problem is most acute where difficult draws of ferrous metals are involved. Drawing operations require costly tools and dies. It follows that wear and abrasion are very important considerations in tool and die work.

Among the suggestions contained in [illegible] upon the surface of the work to be drawn, an integral phosphate coating and applying thereto a film of sodium tallow soap having borax distributed therein. It is contended that a solid meltable organic binding material mentioned in Claim 4 includes sodium tallow soap and that a solid inorganic compound mentioned in the claim includes borax.

Mohs' hardness scale is a known standard for indicating the relative hardness of materials. It is used in Claim 4 as a specification that the "solid inorganic compound" of the claim should not be hard enough to scratch the steel being drawn.

The prior art disclosed a number of lubricating schemes. These included the use of ordinary lubricating oils or lubricants containing finely divided infusible pigments such as clay, lime, mica or graphite. Most of such schemes were classified as "wet-film" lubricants which were wet and oily to the touch.

Later followed what is known as Singer's process, evolved in Germany and described in Singer United States Patent No. 2,105,015. Singer's scheme was to form a sponge-like coating, such as a phosphate, on the surface of the workpiece. The coating was not wet or flowable but was integral with the workpiece and could not be squeezed out in the drawing operation.

Phosphate coatings had been in use as early as 1914. These coatings had no lubricating value *per se*. They were, in fact, abrasive and caused tool and die wear even through superposed lubricants. The reason they were used in lubricating schemes was due to their ability to absorb and carry lubricant into a high pressure zone.

The next step forward in the art after the Singer process, was the development of the Gilron "Dry-Film" soap and borax lubricant. In this process, soap and borax were mixed with water and applied as an aqueous solution to the surface of the workpiece. The soap and borax coating was then dried by heat lamps [illegible]

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As drawn, it was a hard fixed film and stayed with the workpiece in the high pressure zones. No other lubricant was used.

The Gilron soap-borax coating on bare metal being transparent, permitted inspection of the workpiece and eliminated the abrasive phosphate. The Gilron process supplanted the Singer process in the shell case program of the United States Government during World War II.

In 1942 and thereafter until 1945, Henricks, the patentee of the patent in suit, was employed by Gilron Products Company and was familiar with the uses of soap-borax lubricants described in patents No. 2,469,473 and 2,530,837. The Gilron lubricating product for use in drawing steel was sold under the tradename "Drawcote" and was composed principally of sodium soap formed from tallow and palm oil, and of borax in proportion by weight of 10-33% soap to 67-90% borax.

Drawcote was sold in the form of a dry powder. Gilron Products Company obtained patents on Drawcote and its use. United States Patents No. 2,469,473 dated May 10, 1949, and No. 2,530,837 dated November 29, 1950, were obtained upon the joint application of Gilbert H. Orrum, a partner of Gilron Products Company and his employee Henricks, the patentee of the patent in suit.

Drawcote was extensively sold and used in 1942 and 1943 in cold drawing of steel cartridge cases. In those years during World War II, there was a shortage of copper for making brass shell cases for rifle ammunition used in military and small arms weapons. The Government required manufacturers of shell cases to make them from steel by cold drawing and deforming. This manufacture of steel shell cases occurred largely during the period 1942–1944, after which copper again became available.

In the manufacture of shell cases, Gilron's Drawcote was able to replace the use of other lubricants such as lubricating copper coatings for steel and lubricating [illegible] coatings for steel.

In 1943, among those using a lubricated phosphate coating on steel in the operation of cold drawing steel 75 mm. shell cases, was Briggs Manufacturing Company, Detroit. That Company was then providing zinc phosphate coatings on steel blanks and applying thereover a sulphurized grease as a lubricant. About June 1943, Whitbeck of Gilron Products Company sold Drawcote to Briggs. By experimentation, Briggs found it could successfully carry out its cold drawing operation with the Drawcote soap-borax lubricant applied directly to the surface of the steel without the phosphate coating.

Plaintiffs admit the Gilron borax coating solved many drawing problems existing at that time and that even today it is satisfactory for many draws. However, plaintiffs claim the process has its limitations and cannot do what the Henricks process does.

The Patent Office was fully advised of the nature and advantages of the Gilron process. Patent No. 2,469,473 was a file wrapper reference.

Several references are made in the briefs to the "German Process." That was developed prior to 1942. In the process, a phosphated workpiece is soaked as long as fifteen hours in an aqueous soap solution to form thereon by chemical interaction between the phosphate and soap, a water-insoluble soap film. A serious defect in this scheme was that the residual deposit was not water soluble and presented a difficult cleaning problem, especially if the workpiece was to be electroplated.

Plaintiffs concede all of the elements which Henricks employed in Claim 4 of the patent in suit were old *per se* or in other combinations and have been available in the art for some years. However, plaintiffs contend that the elements which Henricks selected were put together in a new way and achieved a new and unexpected result.

Plaintiffs claim that in the specific embodiment of Claim 4, the "phosphate coating" in the abrasive coating of the Sin-

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er process—a seeming retrogression in the art. The overlying film is a fixed one and the "solid meltable organic" constituent thereof is soap, the use of which had previously been found undesirable because of the cleaning problem. The "solid meltable inorganic compound" distributed therethrough, meltable at a temperature below the melting point of the abrasive phosphate coating and having a hardness not more than 5 on the Mohs' scale, is borax.

Plaintiffs argue that new and unexpected results flow from the conjunction of elements defined in the drawing process of the Henricks' patent; that tool and die life is greatly increased and severe drawing operations can now be performed which were previously impossible. Plaintiffs say there is a coaction during the high temperatures and pressures whereby the abrasive phosphate coating reacts with the borax to form amorphous glassy materials which contribute significantly to the lubricating value of the coating; that the formation of insoluble organic materials is inhibited and there is no cleaning problem.

There is substantial evidence in the record to prove that a new coaction between the soap, borax and phosphate occurred during the drawing process. Friedberg's tests showed that in the Henricks' process, new compounds are formed; the formation of insoluble organic compounds is inhibited, and the abrasive phosphate is transformed into a glassy amorphous compound having highly effective lubricating properties.

There was also proof based upon commercial use and experience. Metal Forming & Coining Corporation tried a number of the prior art schemes including oils, waxes and drawing compounds, but the testimony showed that the only process that enabled this Company to cold form or coin small parts commercially is the combination in the Henricks' patent in suit. Testimony showed tool and die life was increased one thousand fold so that for given tools, three or four hundred thousand pieces were run where previously only three or four hundred pieces could be run. The Henricks' process made it possible to manufacture articles of superior quality at a much lower cost, the advantage being so marked in some cases as to spell the difference between success and failure on heavy reductions and difficult extrusions.

Defendants have engendered a great interest in an endeavor to have the Henricks' patent in suit declared invalid. The defense of this action has been conducted primarily by the attorneys for the Parker Rust Proof Company of Detroit. Parker supplies phosphate and lubricating materials to defendant General Motors, and is holding General Motors harmless. Parker solicited financial and legal help in this lawsuit from a number of its own competitors, and at least three of these competitors in manufacturing and selling phosphate and lubricating material, have given assistance in this case. Of course, these competitors had the right to give such assistance. However, such interest does indicate that the process covered in Claim 4 of the patent in suit is something of special value and merit and of great importance to those working in the field of cold drawing and deforming operations.

The trial court held Claim 4 too broad and lacking in specificity. The court stated the claim did not specify the kind of phosphate coating, the kind of organic binding, the kind of solid inorganic compound, as well as not specifying the amounts and relative proportions of any such items.

Pertinent on this point is a recent case before this Court, Binks Manufacturing Company v. Ransburg Electro-Coating Corporation, 281 F.2d 252. In that case the claim was made that the method claims of the patent there in suit did not satisfy the requirements of the patent statute (35 U.S.C. § 112) due to failure to specify voltage, spacing and liquids for which they are applicable. In overruling this argument we said at page 256 of 281 F.2d: "The process claims define the specific steps of procedure and the

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...ions being addressed to those skilled ...e art * * * need not recite de...ails." We further stated at page 257 ...21 F.2d: "There is no requirement ...at quantitative values for such factors ...voltage, spacing and liquid character...istics be recited. The fact that experi...mentation or the exercise of judgment is ...ecessary to adapt a patented process to ...particular material or to obtain the par...ticular results desired does not impair ...validity of the patent."

[1] The fact that Claim 4 distin...guishes from thirty-one references in a ...mature art, none of which anticipate, ...we clearly establishes that the claim ...is not too broad and indefinite.

[2] Patent claims should be generic ...in character and do not necessarily have ...to be specific. It is entirely proper to re...fer in Claim 4 to "a phosphate coating" ...without specifying which "phosphate ...coating."

...The examples stated in the patent in ...suit and the specification teach the use ...of soap and borax over phosphate. They ...give formulas for the soap and borax and ...specifically identify the phosphate coating baths ...that one skilled in the art could make ...use. The trial court was in error in ...finding that Claim 4 in the patent in ...suit was too broad and lacking in specifici...ty.

[3] It is fundamental that a patent ...is presumed to be valid and the burden ...of establishing invalidity rests on the par...ty asserting it (35 U.S.C. § 282). It is ...well established the presumption of valid...ity is not overcome except by clear and ...convincing evidence. Radio Corporation of ...America v. Radio Engineering Labora...tories, Inc., 293 U.S. 1, 7, 55 S.Ct. 928, 79 ...L.Ed. 163; Hazeltine Research, Inc. v. ...Zenith Electric Company, Inc., 7 Cir., 271 ...F.2d 218, 224.

...Defendants claim the Patent Office did ...not consider Singer Patent No. 2,105,015 ...or British Patent No. 494,830 of 1938, ...also several publications. However, ...the Singer process is described in British ...Patent No. 496,866 which was relied upon ...by the Patent Office during prosecution of ...the patent. Soap and borax dry-film lubricants are described in Patents No. 2,469,473 and 2,470,062. The former was relied upon as a reference in the Patent Office and the latter is referred to in the body of the specification of the Henricks' patent in suit.

The Patent Examiner had before him as prior art, all of the elements of Henricks' combination and found patentable invention in the combining of these elements. In fact, the Patent Office twice found invention over the prior art, first, when the original patent was granted, and second, when the reissue patent was granted. There is no showing in this case that the most pertinent prior art was not considered by the Patent Office. On the contrary, we think the most pertinent art was cited and was found insufficient to negative patentability.

We cannot sustain the conclusion of law of the trial court that Henricks merely adopted the process which, in view of the prior art, was obvious to persons skilled in the art. The history of Parker Rust Proof Company demonstrates the process was not obvious. Parker Rust Proof has been a self-proclaimed leader in this field since 1914, but Parker remained uncertain as to how the problem should be solved until some considerable time after the Henricks' invention date.

Dr. Gibson was Technical Director for Parker in 1949 when they decided to develop a lubrication system. Dr. Gibson is now a professor of chemistry and qualified as one "skilled in the art." Parker, in 1949, was operating in the light of the prior art. Dr. Gibson was in charge of this development. They started in "basically with a literature search." They then worked with wet-film lubricants because, as Dr. Gibson testified, "We hadn't realized the true value of drying that particular film." Parker experimented with the formation of an organic film with phosphate as mentioned in the German references. Finally, Parker came to the Henricks' combination which it extolled in its literature as a new develop-

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The literature references which Parker now points to as teaching the invention, taught Parker nothing. Neither did the practices at Briggs Manufacturing Company. The substitution of soap and borax dry-film for the wet lubricant in the Singer process was, in fact, not obvious to Parker.

The Henricks' process was not, in fact, obvious to the defendants and the others now associated with them in the defense of this suit. None of them made the substitution of elements in the Singer process which, by hindsight, now appears to them to have been "obvious."

Although the learned trial judge found Claim 4 of the patent in suit to be invalid on all suggested grounds, we are of the view that the closest question in the case is the finding and conclusion of the trial court as to public use. This, in turn, refers to use at Briggs Manufacturing Company in 1943. All of the evidence on this point, except patentee's own evidence, is contained in depositions. It is apparent from Finding 14 that the Court relied upon the testimony of Tousley and Brown which appeared in depositions.

[4] As the evidence relied on appears in depositions, we are in as good a position as the trial court to examine it and determine for ourselves whether the use at Briggs Manufacturing Company was a public use. Kiwi Coders Corporation v. Acro Tool & Die Works, 7 Cir., 250 F.2d 562, 568; Lewyt Corporation v. Health-Mor, Inc., 7 Cir., 181 F.2d 855, 857.

The trial court did not hold the combination claimed in the patent in suit was publicly used in its entirety or that the valuable new result flowing from the combination was understood or achieved at Briggs. What the trial court decided was: "While it is arguable that the precise combination and coaction indicated by the patent are not found verbatim in the prior art, one armed with the knowledge of a worker skilled in that field could, the Court believes, have achieved the result covered by Claim 4 of the reissue patent." The trial court further recognized that the patentee in the patent in suit did make a stride forward in the art but apparently thought it was not sufficient to merit a patent monopoly.

[5] There exists a well established rule that to invalidate a patent on the ground of public use, the prior public use must be established by clear and convincing proof.

In Smith v. Hall, 301 U.S. 216, 233, 57 S.Ct. 711, 718, 81 L.Ed. 1049, the Court refers to the rule as "* * * the heavy burden of persuasion which rests upon one who seeks to negative novelty in a patent by showing prior use." In Radio Corporation of America v. Radio Engineering Laboratories, Inc., 293 U.S. 1, 55 S.Ct. 928, 931, 79 L.Ed. 163, the Court cites with approval a number of cases for the proposition, the burden of proof is upon the party setting it up and "every reasonable doubt should be resolved against him." Indeed, the late Chief Judge Learned Hand stated the rule in even more emphatic language in Block & Nathan Anklet Support Co., Inc., 2 Cir., 9 F.2d 311, 313, "* * * but in such cases probability, even extreme probability, is not enough. The proof must be as absolute as in a criminal conviction; indeed, the rule comes nearly to this, that one must have contemporaneous record, verbal or structural."

In June 1943, when Henricks came to the Briggs Manufacturing Company on behalf of the Gilron Products Drawcup a number of experiments were conducted which led to the changeover from the Singer process to Gilron. Each blank tested was subjected to six consecutive forming operations. Henricks experimentally ran two baskets of blanks with a phosphate undercoat. There were approximately one hundred test pieces in the two baskets, a very small amount considering the large volume being handled. No further notice was taken of the pieces themselves, and they were enveloped in the big flow of material that was in process. The success of the process was in no way there demonstrated. This routine minor incident at Briggs did

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use of the patented combination by Briggs. In fact, Briggs abandoned the use of phosphate entirely. The temporary and almost casual experiment with soap and borax went into the discard.

After the decision in this case by the trial court, Henricks received information that the United States Government Arsenal at Joliet, might have a report which would show the true facts as to the Briggs operation. Inquiry there revealed nothing. The inquiry was forwarded to Frankfort Arsenal. Nothing was found there, but when the inquiry was forwarded to the Record Files in Missouri, a report was located. Henricks was permitted to read the report and make extracts therefrom.

Plaintiffs filed a motion to amend the findings of fact and for a new trial. The Court denied the motion. This was understandable where the Court considered the patent to be invalid on all grounds urged. However, as our view is that the turning point of this case is the question of alleged public use at Briggs, we think the report should have been considered, especially that part which deals with the initial experimentation with the Gilron process. It would appear reasonable that if there had been any significant or more than experimental use of soap and borax over phosphate in cartridge-case manufacture at Briggs, it would surely have appeared in the report which the Briggs officials made to the army ordnance.

Another convincing argument in favor of plaintiffs' contention is that if soap and borax had been applied over phosphate in regular production, there would necessarily have been a tank for phosphate solution and a separate tank for the soap and borax solution arranged in series so that the baskets containing the racks or workpieces would move successively through the two solutions. There is no claim that any such procedure was followed.

[1] We hold there is no sufficient showing of prior public use and that claim 4 of the patent in suit is valid. The case will, therefore, be remanded to the District Court for further proceedings consistent with this opinion, as the question of validity only was passed upon in the previous trial.

Reversed.

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DEVEX CORPORATION et al., Plaintiffs-Appellees,

v.

HOUDAILLE INDUSTRIES, INC., Defendant-Appellant.

No. 15732.

United States Court of Appeals
Seventh Circuit.

July 12, 1967.

Action for patent infringement. The United States District Court for the Northern District of Illinois, Eastern

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..., Edwin A. Robson, J., granted plaintiffs' motion for summary judgment, and defendant appealed. The Court of Appeals, Major, Senior Circuit Judge, held that importance of difference between patent holders' process requiring extreme temperatures and pressures of 100,000 to 250,000 pounds Hertz stress and alleged infringing process requiring only 10 to 25,000 pounds Hertz stress was fact question, precluding summary judgment decreeing infringement and enjoining further infringement of patent claim which was to be given narrow and restricted construction.

Reversed and remanded.

1. Courts ⇐406.1(3)

A court with jurisdiction to hear appeal from injunction order must have jurisdiction to consider propriety of the premise upon which injunction issued. 28 U.S.C.A. § 1292(a) (1).

2. Patents ⇐324(5)

Reviewing court's authority to consider propriety of injunction against further patent infringement carried with it the authority to consider the infringement issue. 28 U.S.C.A. § 1292 (a) (1).

3. Patents ⇐324(2)

Court of Appeals had jurisdiction of appeal from summary judgment granting injunction against further infringement of patent. 28 U.S.C.A. § 1292(a) (1); Fed.Rules Civ.Proc. rule 56(c), 28 U.S.C.A.

4. Patents ⇐324(5¼)

Defendant did not waive right to complain on appeal of error in summary judgment for injunction against further patent infringement although defendant served notice of motion informing plaintiffs that defendant, without waiving any rights, would present attached draft of summary judgment order. Fed.Rules Civ.Proc. rule 56(c), 28 U.S.C.A.

5. Courts ⇐406.3(1)

On appeal from summary judgment, ... within province of Court of Appeals to make determination on factual issues. Fed.Rules Civ.Proc. rule 56(c), 28 U.S.C.A.

6. Federal Civil Procedure ⇐2461

Caution is to be exercised in granting summary judgment. Fed.Rules Civ. Proc. rule 56(c), 28 U.S.C.A.

7. Patents ⇐157(1)

The construction of a claim when patent validity is contested controls construction of same claim when infringement is alleged.

8. Patents ⇐323

Importance of difference between patent holders' process requiring extreme temperatures and pressures of 100,000 to 250,000 pounds Hertz stress and alleged infringing process requiring only 10 to 25,000 pounds Hertz stress was fact question, precluding summary judgment decreeing infringement and enjoining further infringement of patent claim which was to be given narrow and restricted construction.

9. Patents ⇐312(3)

Whether 1946 disclosure relating to glyceryl borate was equivalent of soapborax over phosphate disclosed in patent specifications filed in 1950 was fact issue for expert testimony, in patent infringement case.

10. Patents ⇐314

That patentee made admission to Canadian Patent Office contrary to that made to court in United States with relation to date of patent disclosure related to patentee's credibility and presented matter for consideration by trier of facts.

Carlton Hill, Benjamin H. Sherman, Chicago, Ill., for appellant.

Walter J. Blenko, Arland T. Stein, Pittsburgh, Pa., William C. McCoy, Jr., Cleveland, Ohio, Frank H. Marks, Chicago, Ill., for appellees.

Before MAJOR, Senior Circuit Judge, and SWYGERT and CUMMINGS, Circuit Judges.

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MAJOR, Senior Circuit Judge.

This appeal is a continuation of litigation of long duration. On November 13, 1956, plaintiffs filed their complaint against General Motors and Metal Lubricants Company for infringement of Henricks Patent Re. 24,017, dated June 7, 1955. On May 22, 1957, plaintiffs filed a companion case against the instant defendant (Houdaille Industries, Inc.), for infringement of the same patent. In both cases plaintiffs relied solely upon Claim 4. The cases were consolidated on the common issue of validity, and Judge Robson held the Henricks patent invalid. On appeal, this Court reversed, held the claim valid and remanded the case for further proceedings consistent with the opinion. Devex Corp. et al. v. General Motors Corp. et al., 7 Cir., 321 F.2d 234, cert. den. 375 U.S. 971, 84 S.Ct. 490, 11 L.Ed. 2d 418. Upon remand, the case against Metal Lubricants Company was dismissed by consent and that against General Motors, on motion by plaintiffs, was transferred to the District of Delaware.

In the instant case plaintiffs moved for a summary judgment that defendant had infringed Claim 4 of the Henricks patent, which was first denied. After further deposition testimony was taken, plaintiffs renewed their motion and on February 17, 1966, it was allowed. The case is here on defendant's appeal from this judgment.

On June 23, 1965, prior to plaintiffs' renewed motion for summary judgment, defendant, with leave of the Court, filed an amended answer setting up additional defenses, including (a) license, (b) laches, (c) prior public use by defendant, (d) shop right, (e) patent misuse, (f) intervening rights, (g) lack of continuity between the original patent and the preceding abandoned application and (h) release. The amended answer allegedly was based upon facts ascertained from the May 17, 1965 deposition of Henricks. In connection with its the production of documents, which denied.

The Court in its summary judgment decreed infringement of Claim 4, enjoined defendant from further infringement and referred the case to a Special Master to hear and submit to the Court findings on the issue of damages. The judgment also provided for a determination by the Master of the affirmative defenses invoked by defendant. On March 3, 1966, defendant's motion to vacate the summary judgment was denied.

The companion case of General Motors, transferred to the Delaware District as previously shown, was heard by Judge Caleb M. Wright on plaintiffs' motion for summary judgment. In a well reasoned opinion the Court concluded that summary judgment was inappropriate and denied such relief. Devex Corp. et al. v. General Motors Corp., 263 F.Supp. 17. Concerning the Delaware case, defendant on brief states, "So far as infringement is concerned, the issues there are substantially identical with those involved here." Plaintiffs take no issue with this statement, in fact do not even mention the case although it was decided more than two months prior to the date on which plaintiffs' brief was filed in this Court, with the same counsel representing plaintiffs in both cases.

In the interest of brevity, we refer to our previous opinion written by Judge Duffy, for a history of plaintiffs' patent, its purpose and scope, the claim relied upon and the reasoning on which validity was sustained.

At the inception we are met with plaintiffs' challenge that the order under attack is not appealable and should be dismissed. Defendant responds that we have jurisdiction under Par. (a) (1) (4) of Sec. 1292, Title 28 U.S.C.A. The former provides jurisdiction of an appeal from an order granting an injunction, the latter from judgments for patent infringement which are final except for accounting. Plaintiffs cite a number of cases in support of the point that "

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...n injunction brings up for review nothing but the propriety of granting the injunction," and such appeal "does not bring up for review those parts of the decree which affect only the reference to a Master and bear no necessary relation to the merits of the injunction."

In Loew's Drive-In Theatres, Inc. v. Park-In Theatres, Inc., 1 Cir., 174 F.2d 547, 550, the Court stated:

"Our jurisdiction over this cause of action on appeal, however, is another matter. For although injunctive relief is granted in the judgment appealed from and we have appellate jurisdiction over such judgments under 28 U.S.C.A. Sec. 1292 (1) even though interlocutory, we have jurisdiction to review only that part of such judgments as have to do with the injunctive relief afforded and no other."

In Racine Engine & Machinery Co. v. Confectioners' Machinery & Mfg. Co., 7 Cir., 234 F. 876, 878, speaking to the same point, this Court stated:

"* * * if and after the patent is sustained, infringement found and injunction awarded, upon appeal this court may finally determine the validity of the patent, and its determination is binding on the District Court."

[1-3] These and other cases cited by plaintiffs recognize that a court with jurisdiction to hear an appeal from an injunction order must necessarily have jurisdiction to consider the propriety of the premise upon which the injunction issued. As applied to the instant case, our authority to consider the propriety of the injunction carries with it the authority to consider the infringement issue upon which the injunction issued. It may be that we are without authority to consider the affirmative defenses interposed by defendant prior to the entry of the summary judgment and referred to the Master for decision. We need not be concerned in this regard, however, because, assuming we have such authority, we would not be disposed to exercise it in the absence of a ruling by the court below on such issues. We hold that we have jurisdiction of the appeal from the injunction order and of the infringement issue upon which it is predicated.

[4] Plaintiffs also contend that defendant has no standing to complain of the order enjoining it from further infringement, on the basis that it consented to and openly invited its entry thereby waiving any right to complain of error. We see no reason to cite or discuss the cases cited in support of this contention. They are without application to the facts of the case.

In this connection plaintiffs place much emphasis on the assertion that the judgment order was proposed by defendant. True, it was so labeled, but there clearly emerges, on a confusing record, the fact that defendant did not consent to or invite the order, particularly that part which enjoined it from further infringement. Plaintiffs attached to their original and again to their renewed motion for summary judgment a form of proposed judgment. The Court in an oral decision granted plaintiffs' renewed motion and, at the Court's suggestion, plaintiffs submitted a revised form of judgment. On February 16, 1966, defendant served on plaintiffs a "Notice of Motion," notifying them that defendant "*without waiving any rights* will present the attached draft of a judgment order." The February 17 order alleged to have been proposed by defendant was presented to the Court, "approved as to form." [1]

Defendant in no way consented to the injunction or waived its opposition thereto; its activities were confined to limitations on the forms of judgment submitted by plaintiffs. Moreover, defendant subsequently attacked the entire judgment order by its motion to vacate which was denied March 3, 1966. Plain-

[1] Neither on brief nor in their appendix cited in support thereof do plaintiffs ... posed "without waiving any rights" and was "approved as to form" only.

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ffs' argument on this phase of the se is entirely without merit.

[5] Preliminary to any discussion the narrow issue for decision, we ust keep in mind that it is not within ur province to make a determination factual issues. The sole question is hether plaintiffs under Rule 56(c), ederal Rules of Civil Procedure, were ntitled to a summary judgment and ereby precluded defendant of the right a hearing. The citation of only a w of the many cases which have nounced the criterion to be employed resolving such question will suffice.

In Poller v. Columbia Broadcasting ystem, Inc., et al., 368 U.S. 464, 467, 2 S.Ct. 486, 488, 7 L.Ed.2d 458, the ourt stated:

"This rule authorizes summary judgment 'only where the moving party is entitled to judgment as a matter of law, where it is quite clear what the truth is, * * * [and where] no genuine issue remains for trial * * [for] the purpose of the rule is not to cut litigants off from their right of trial by jury if they really have issues to try.'"

he Court further stated (page 473, 82 .Ct. page 491):

"We look at the record on summary judgment in the light most favorable to Poller, the party opposing the motion, and conclude here that it should not have been granted."

In National Screen Service Corp. v. oster Exchange, Inc., 5 Cir., 305 F.2d 47, 651, the Court stated:

"The rule should be invoked cautiously in order to allow a full trial where there is a bona fide dispute of facts between the parties. Summary judgment should be granted only where the moving party is entitled to judgment as a matter of law, *where it is quite clear what the truth is*, when no genuine issue remains for trial, and it is not the purpose of the rule to deny to litigants a right of trial if [illegible] [Citing

the Court to decide factual issues, but only to determine whether there are factual issues to be tried [Citing case.]

"* * * A long line of cases have held that summary judgment should not be granted if there is the 'slightest doubt' as to the facts; which is actually another way of stating that there is no genuine issue as to any material fact. The fact that it may be surmised that the party against whom the motion is made is unlikely to prevail at the trial is not sufficient to authorize summary judgment against him."

[6] Among other cases which have emphasized that caution is to be exercised in granting summary judgment are two of this Court. American Securit Co. v. Hamilton Glass Co., Inc., 7 Cir., 25 F.2d 889, 892, and Technograph Printe Circuits, Ltd. v. Methode Electronic Inc., 7 Cir., 356 F.2d 442, 446.

After much study of the voluminous record, we conclude that the Court erre in allowing plaintiffs' motion for sum mary judgment. We think defendant i entitled to a trial on the infringemen issue, as well as any relevant issu raised by its amended answer. Whil Judge Robson in his opinion (not pub lished) discusses the restrictions place by this Court on Claim 4 as a basis fo our holding of validity, it seems to that he mistakenly based his conclusio on a literal reading of the claim. In h opinion he states, "As plaintiffs poi out, there can be little question that d fendant's practice responds to Claim so as to constitute infringement thereo Following this statement he analyzes t claim element by element, concludes th defendant's process responds to each said elements and states, "The Cou therefore concludes that the plaintif renewed motion for summary judgme should be granted * * *; that the should be a finding of infringement the defendant of Claim 4 of the Reis Patent No. 24,017, upon the basis defendant's answers to the in rogatories and the deposition

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Concerning the holding of Judge Robson, plaintiffs on brief state:

"* * * he held that Houdaille's attempts to avoid a finding of infringement by reading the claim restrictively was not warranted by the language of that opinion [321 F.2d 234], or by the language of the claim itself."

For reasons subsequently shown, we think this is a fallacious approach to the infringement issue. Our previous decision requires that the claim in suit be given a narrow and restricted construction.

We need not give any consideration to the prior art which Judge Robson in the first hearing considered and upon which he found Claim 4 invalid. In our previous decision (321 F.2d 234), reversing his holding of invalidity we stated (page 236):

"Plaintiffs concede all of the elements which Henricks employed in Claim 4 in the patent in suit were old *per se* or in other combinations and have been available in the art for some years. However, plaintiffs contend that the elements which Henricks selected were put together in a new way and achieved a new and unexpected result."

Thus, it was conceded that all of the elements of the claim were old in the art, but plaintiffs sought to uphold validity upon the basis that such elements were put together in a new way and achieved a new and unexpected result." It was solely on this basis that this Court sustained validity and reversed the District Court. In this connection we stated (page 237):

"Plaintiffs argue that new and unexpected results flow from the coaction of elements defined in the drawing process of the Henricks' patent; that tool and die life is greatly increased and severe drawing operations can now be performed which were previously impossible. Plaintiffs say there is a coaction during the high temperatures and pressures whereby with the borax to form amorphous glassy materials which contribute significantly to the lubricating value of the coating; that the formation of insoluble organic materials is inhibited and there is no cleaning problem.

"There is substantial evidence in the record to prove that a new coaction between the soap, borax and phosphate occurred during the drawing process. Friedberg's tests showed that in the Henricks' process, new compounds are formed; the formation of insoluble organic compounds is inhibited, and the abrasive phosphate is transformed into a glassy amorphous compound having highly effective lubricating properties."

We further pointed out that there was testimony that by use of the process "tool and die life was increased one thousand fold" and that the process made it possible "to manufacture articles of superior quality at a much lower cost."

It is difficult to discern how plaintiffs can contend with any plausibility that defendant is an infringer, based upon a literal reading of the claim. In the previous case plaintiffs urged as a ground for sustaining validity a narrow and restricted application of the "specific embodiment of Claim 4." On brief they state:

"Specifically, there is a coaction during the high temperatures and pressures of the drawing process whereby the abrasive phosphate coating reacts with the borax to form amorphous glassy materials which contribute significantly to the lubricating value of the coating. The formation of insoluble organic materials is inhibited and there is no cleaning problem."

They also relied on "new and surprising results" to meet the test of Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147, 71 S.Ct. 127, 95 L.Ed. 162. Thus, having obtained a decision of validity on a narrow and restricted basis, they now contend inconsistently we think that the

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fendant's alleged infringing process. Such a construction would monopolize the whole broad field of metal forming with any use of a dry soap and borax over phosphate at any temperature or pressure, regardless of the results.

[7] Judge Wright of the Delaware Court in the *General Motors* case (263 F.Supp. 17) followed the decision of this Court in sustaining the validity of Claim 4 (that here involved) but disagreed with Judge Robson in allowing plaintiffs' motion for summary judgment. In his opinion he pointed out numerous unresolved factual issues which formed the basis for his denial of plaintiffs' motion for a summary judgment. Without restating the issues which he discussed, it is significant to note that he refused, on the issue of infringement, to give effect to a literal reading of Claim 4. Instead, he held that the restrictions placed upon the claim by this Court in sustaining validity must be taken into account. In so doing he stated (page 25):

"* * * the construction of a claim when its validity is contested controls the construction of that same claim when its infringement is alleged. The patentee cannot urge a restrictive interpretation of his claim to avoid invalidity and then an expansive interpretation to ensnare infringers."

This principle has been recognized by this Court. In Fife Mfg. Co. v. Stanford Engineering Co., 7 Cir., 299 F.2d 223, 226, we stated:

"It is well settled that a patent owner may not apply a narrow construction to his claim to avoid the prior art and then apply a broad construction to include an accused device."

See also Wire Tie Machinery Co. et al. v. Pacific Box Corp. et al., 9 Cir., 107 F.2d 54, 55.

The "new and unexpected result" which plaintiffs urged upon this Court in their argument in behalf of validity, to which we gave recognition, certainly was not revealed by a literal reading of Claim assurance that if a literal reading of the claim had been relied upon, we would have affirmed the District Court in its holding of invalidity in view of the prior art. The patentee's thesis of "new and unexpected result" was based upon the addition to the patent specifications of Examples XIX and XX, filed October 31, 1950, in connection with his continuation-in-part application, Serial No. 413,490. These Examples, which gave formulas for soap and borax over phosphate, were included in the patent issued March 4, 1952 and, as stated by plaintiffs on brief, "By issuance of this patent, the Henricks applications were first made available to the public and thereby, for the first time, became public knowledge."

Based upon Examples XIX and XX the Friedberg tests were made, which formed the basis of this Court's statement that there was evidence of a "new coaction between the soap, borax and phosphate during the drawing process." Judge Wright on this point stated (page 25):

"The Friedberg tests involved drawing conducted under high pressures involving severe deformation of the metal, whereas the GM operation involves much lower pressures. And Henricks, the patentee, himself states that it is a high pressure operation generating sufficient heat to thaw the meltable pigment which forms a part of his invention. The Court requires the aid of expert testimony to determine whether these differences are or are not, important."

[8] In the instant case, as in General Motors, there is evidence that the patentee's process recognized by this Court required "extreme temperatures and pressures of from 100,000 to 250,000 pounds Hertz stress." There is also evidence that defendant's alleged infringing process requires pressures of only "to 25,000 pounds Hertz stress." Moreover, the tests relied upon were made in the drawing of wire rods. Plain-

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issue as to whether the same result would have been obtained in the drawing of defendant's alleged infringing automobile bumpers.

While these issues are not all inclusive, we think they alone are such as to negate the propriety of a summary judgment.

We might with propriety conclude our opinion at this point. Even so, we think we should discuss the issue of "intervening rights," relied upon by defendant as a defense to the charge of infringement. As already noted, defendant on June 23, 1965, after having first obtained leave of the Court, filed an amended answer setting forth a number of affirmative defenses. (Of such defenses only "intervening rights" is argued here.) Plaintiffs on brief refer to these defenses as "last minute affirmative defenses," even though the amended answer was filed prior to the filing of plaintiffs' second motion for summary judgment. No attack was made upon such defenses by motion to dismiss the answer or otherwise.

Judge Robson in his bench discussion stated:

"The Court is of the opinion that on this remand it is not within its province to reassess the validity of the patent as it might be affected by the defense of prior public use."

This statement no doubt was based upon the finding of this Court in its previous opinion that the patentee's record date of invention was April 29, 1946, since Claim 4 is identical to Claim 45 allowed by the Patent Office, and defendant may not now assert the October 31, 1950 date. (341 F.2d 234, 235.)

It is not claimed that our holding relative to public use in connection with the issue of validity is *res adjudicata* with reference to the defense of intervening rights to the charge of infringement. The District Court did not so decide but instead referred the issue to the Master for decision. In doing so, the Court said:

"... view of the findings here ... am aware of them, will more or less fall by the wayside and it would be a matter of a reference to the Master, but certainly I am willing to consider any and all matters which may be concerned."

We doubt the propriety of such reference, see Prepo Corp. v. Pressure Can Corp., 7 Cir., 234 F.2d 700, 704, but need not dwell on the point inasmuch as the judgment is to be reversed.

On the state of the record shown, we think it plain that the issue relating to the defense of "intervening rights" remains before the Court and must be resolved on the record made in this case, which is quite different from that previously before this Court.

There is evidence that defendant commenced use of the alleged infringing process as early as April 25, 1949, more than one year prior to the filing of the continuation-in-part application upon which was issued Patent No. 2,588,234, dated March 4, 1952, from which the reissue patent in suit was issued June 7, 1955. Thus, defendant contends that the coaction on which this Court found inventiveness (a soap-borax fixed film over an integral phosphate coating) was not disclosed by Henricks in his earlier but abandoned application; in fact, it was first disclosed in his continuation-in-part application filed October 31, 1950, which matured into the patent in suit.

[9] As previously shown, "the new and unexpected result" which plaintiff urged upon this Court followed the disclosures in Examples XIX and XX, first made a part of the patent specifications filed October 31, 1950. In fact, Henricks on deposition so admitted. He was asked, "What I am trying to understand, Mr. Henricks, is this: you had no soap-borax over phosphate in your abandoned application?" and he answered, "Correct." Plaintiffs attempt to bridge this gap by arguing that in the abandoned application the "glyceryl borate" was "fully equivalent" to the

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that made in 1950, upon which he obtained an adjudication of validity, is an issue of fact. Graver Tank & Mfg. Co., Inc., et al. v. Linde Air Products Co., 339 U.S. 605, 609, 70 S.Ct. 854, 94 L.Ed. 1097. Moreover, the issue is one for expert testimony.

Also material to the issue under discussion is a matter presented by defendant as newly discovered evidence in connection with its motion to vacate the judgment. On October 29, 1951, Henricks filed with the Canadian Patent Office his application for a patent entitled "Method of Drawing Metal," which was allowed. In the Canadian application Henricks stated that he was entitled to the October 31, 1950 United States filing date under Treaty or Convention Rights of Applicants as it "relates to all claims," because the United States 1950 application was "* * * the first application for patent for the said invention filed in any country by him or anyone claiming under him."

The specifications, including Examples XIX and XX, and the claims, including Claim 4 in suit, of the Canadian patent were identical with the 1950 United States application. Thus, Henricks represented to the Canadian Patent Office that his 1950 United States application disclosed for the first time the soap-borax-over-phosphate, the premise upon which this Court sustained validity.

Plaintiffs on brief make no denial of the facts just recited relative to the proceedings in the Canadian Patent Office. They state:

"On October 29, 1951, Henricks filed a corresponding Canadian patent application. That application made reference to the continuation-in-part application filed in the United States on October 31, 1950 *for the purpose of obtaining a prior date of invention* under the International Convention and Canadian law insofar as the material in the continuation-in-part application *may* have been added as *'new matter'*. As to that material which *may not* have been added as *'new matter'* in the continuation-in-part application, Henricks is relegated to his filing date in Canada for his date of invention insofar as the Canadian patent is concerned." (Italics supplied.)

This is an admission that Henricks represented to the Canadian Patent Office, apparently for a self-serving purpose, that the disclosure made in his 1950 application in the United States "may have been added as 'new matter.'" The "new matter" referred to, as we understand, consisted of the disclosure made for the first time in Examples XIX and XX of Henricks' 1950 application, which enabled plaintiffs to obtain the "new and unexpected result" urged upon this Court.

Plaintiffs on brief, following the statement lastly quoted, further state:

"The reference in the Canadian application to the 1950 United States application had no effect upon Henricks' United States patent applications."

[10] We think the accuracy of this statement is open to doubt. Assuming it to be correct, however, it misses the point. The fact that he made an admission to the Canadian Patent Office as to the date of his patent disclosure contrary to that which he previously made to this Court, in which he now persists, relates to his credibility and presents a matter for consideration by the trier of the facts.

We decide nothing more than that summary judgment was improvidently allowed. Anything we have said is not to be construed as a resolution of any factual issue. We have attempted only to point out some of the issues of material fact which, in our judgment, entitle the parties to a hearing.

The judgment appealed from is reversed and the cause remanded for that purpose.

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DEVEX CORPORATION et al., Plaintiffs,

v.

GENERAL MOTORS CORPORATION, Defendant.

Civ. A. No. 3058.

United States District Court
D. Delaware.
Jan. 16, 1967.

Civil action for patent infringement, wherein patentee moved for summary judgment. The District Court, Caleb M. Wright, Chief Judge, held that the issue of validity of patent was set to rest by Seventh Circuit Court of Appeals which reversed judgment of federal district court sitting in Illinois and held a claim valid, and decision of the Court of Appeals was binding upon the district court as law of the case and similarly bound federal district court in Delaware to which district court in Illinois transferred the case, but that papers raised fact issue as to whether corporate defendant whose process did not explicitly overlap claim of Patent relating to lubrication of metal for drying and forming operations was guilty of infringement, precluding summary judgment.

Motion denied.

1. Patents ⇐288(3)

"Where defendant resides" for purpose of venue in patent actions means state of incorporation in case of corporate defendant. 28 U.S.C.A. § 1400(b).

See publication Words and Phrases for other judicial constructions and definitions.

2. Patents ⇐288(3)

The degree of use required to establish proper venue in patent infringement cases is of a lesser order of magnitude than that required to establish infringement for liability purposes. 28 U.S.C.A. § 1400(b).

3. Patents ⇐288(5)

Corporation's appearance and defense of patent infringement action on

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objection corporation had timely made, but corporation's subsequent conduct consisting of permitting trial judge to enter judgment in corporation's favor on the merits and not cross appealing, despite language of judge's consolidation order assuring corporation that venue matter would be considered before entry of judgment on validity question, did amount to such a waiver. 28 U.S.C.A. § 1400(b).

4. Patents ⇐324(2)

Denial of corporation's motions to dismiss patent infringment action because of improper venue and entry of final judgment of patent invalidity before resolution of corporation's venue contentions presented sufficient foundation from which corporation could have taken cross appeal had it desired upon appeal of patentee from judgment on the merits. 28 U.S.C.A. § 1400(b).

5. Courts ⇐277.1

In view of corporate defendant's waiver of venue in patent infringement case originally initiated in Illinois, transfer of the case to Delaware on motion of corporate plaintiff should have been made under statute authorizing transfer of civil actions to other districts for convenience of parties and witnesses in interest of justice, not under statute authorizing transfer because venue has been laid in wrong district. 28 U.S.C.A. §§ 1404(a), 1406.

6. Courts ⇐277.1

Expediency and comity dictated that federal district court sitting in Delaware accept patent infringement action transfer, which was erroneously made under statute permitting transfers of cases laying venue in wrong district instead of statute permitting transfers for convenience of parties and witnesses in interest of justice, as having been made under the proper statutory authority, in view of adjudication of validity of patent by transferring court. 28 U.S.C.A. §§ 1404 (a), 1406.

7. Courts ⇐277.1

Courts of coordinate jurisdiction function and pass upon correctness of discretionary transfer orders. 28 U.S. C.A. §§ 1404(a), 1406.

8. Patents ⇐324(6)

The issue of validity of patent was set to rest by Seventh Circuit Court of Appeals which reversed judgment of federal district court in Illinois and held a claim valid, and decision of the Court of Appeals was binding upon the district court as law of the case and similarly bound federal district court in Delaware to which district court in Illinois transferred the case.

9. Courts ⇐406.9(14)

Courts should be even more than usually constrained not to transgress doctrine of law of the case where a full trial and appeal of the question, involving substantial investment of judicial energy have occurred.

10. Courts ⇐277.1

Even if federal court sitting in Illinois lacked venue of patent infringement action, it did not lack power to deal with substantive rights of corporate defendant over which court had personal jurisdiction.

11. Patents ⇐170

The extent of prior art determines scope of proffered invention.

12. Patents ⇐170

Claims of patent infringement must be viewed against backdrop of prior art.

13. Patents ⇐157(1)

Construction of patent claim when its validity is contested controls construction thereof when its infringement is alleged.

14. Patents ⇐168(2¼)

Patentee will not be permitted to urge restrictive interpretation of his claim to avoid invalidity and then expansive interpretation to ensnare infringer.

15. Patents ⇐323

Papers raised fact issue as to whether corporate defendant whose process did not explicitly overlap claim of Patent

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...ing operations was guilty of in-...ngement, precluding summary judg-...nt for patentee.

...Patents ⇐16, 226

"Theory" is not prerequisite to pat-...tability but is important when scru-...izing for infringement.

...Patents ⇐229

Process which falls within literal ...guage of patent claim but can be ...wn to operate in different manner ...n patented process does not infringe ...n the patent.

...Courts ⇐277.1

Venue changes at later stages of ...plicated litigation should generally ...oided, especially in patent cases. 28 ...C.A. §§ 1400(b), 1404(a), 1406.

...David F. Anderson, Berl Potter & An-...son, Wilmington, Del., Walter J. Blen-... Blenko, Hoopes, Leonard & Buell, ...sburgh, Pa., of counsel, for plaintiffs.

...Thomas S. Lodge, Connolly, Bove & ...dge, Wilmington, Del., George N. Hib-..., Hibben, Noyes & Bicknell, Chicago, ..., Neal A. Waldrop, Harness, Dickey & ...rs, and George N. Shampo, Detroit, ..., of counsel, for defendant.

OPINION

...ALEB M. WRIGHT, Chief Judge.

...his is a civil action for patent in-fringement. The patent in suit is Number 24,017; the only claim at issue is number 4.[1] The plaintiff, Devex Corporation (Devex), has moved for summary judgment. Fed.R.Civ.P. 56(a).

[1, 2] Prior to any consideration of the merits of Devex' motion an account of the history of this litigation is essential to place this case in proper perspective. The complaint was filed in the Northern District of Illinois on November 13, 1956. Before answering General Motors Corporation (GM) moved for a dismissal on the ground of improper venue. Section 1400(b), 28 U.S.C.A. (1948), provides that venue in patent actions, shall be in either: the district where the defendant resides, or the district where the defendant has committed acts of infringement and has a regular and established place of business. Where the defendant resides has been consistently interpreted to mean, in the case of a corporate defendant, the state of incorporation.[2] Since GM is a Delaware corporation, the plaintiff's decision to lay venue in the Northern District of Illinois was necessarily predicated upon the defendant's having committed acts of infringement within that district. The motion to dismiss was denied by Judge Barnes, who expressly reserved the question of venue.[3] On July 16, 1957 GM an-

...Claim 4 reads as follows:

"4. The process of working ferrous ...metal which comprises forming on the ...surface of the metal a phosphate coat-...ing and superimposing thereon a fixed ...film of a composition comprising a solid ...meltable organic binding material con-...taining distributed therethrough a solid ...inorganic compound meltable at a tem-...perature below the melting point of the ...ferrous metal phosphate of said coating ...and having a hardness not exceeding ...3 on the Mohs' hardness scale, and ...thereafter deforming the metal."

...ower Corp. v. Fisher Governor Co., ...F.Supp. 716, 719 (S.D.Tex.1963); ...ool Products Corp. v. H & B Ameri-... Corp., 202 F.Supp. 824, 826 (S.D. ...1962); C-O-Two Fire Equipment Co. ...

aff'd sub nom. Cardox Corp. v. C-O-Two Fire Equipment Co., 344 U.S. 861, 73 S. Ct. 102, 97 L.Ed. 695.

3. Judge Barnes' remarks from the bench on May 27, 1957 were as follows:

"Well now, I have thought quite a bit about this case. Venue here is based upon the fact that it is alleged that an infringement was committed in this district, is that it?

* * * * *

"I am not going to try that patent case on a motion to dismiss, you just make up your minds about that. The plaintiff will have to take his chances if he goes through this patent case and does not prove an infringement in this district. I guess I would not have jurisdiction because I wasn't the prop-

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swered. Paragraph 11 of its answer again challenged the propriety of the plaintiff's choice of venue.

On February 4, 1959 Devex moved in the Illinois District Court to consolidate the action against GM with a similar action pending in the same district against Houdaille Industries (Houdaille). GM objected to the consolidation of the two actions on the ground that venue had not been established with respect to GM. But after a pretrial conference Judge Robson ordered consolidation of the two cases. In order to protect GM Judge Robson's order provided for a consideration of the venue question before any decision on validity was entered with respect to GM.

"(2) Immediately following the conclusion of said consolidated trial on the common issue of validity, the issue of infringement within the Northern District of Illinois by General Motors Corporation as it relates to the issue of venue of that Defendant will be tried in Civil Action No. 56 C 1912.

"(3) The issue of infringement within the Northern District of Illinois by defendant General Motors Corporation in Civil Action No. 56 C 1912 *will first be decided* by this Court in order that the issue of venue of that defendant may be determined prior to the rendering of any decision on the issue of validity with respect to defendant General Motors Corporation." (Emphasis added.)

The case, as consolidated, went to trial on the question of validity. On February 1, 1962 Judge Robson handed down a decision on validity, holding the patent invalid. On June 29, 1962 Judge Robson entered his Findings of Fact and Conclusions of Law and a Final Judgment, dismissing the complaints in each action with prejudice. GM did not object to the entry of judgment despite the outstanding venue issue.

Devex took an appeal to the Seventh Circuit. There was no cross-appeal by GM. The Seventh Circuit reversed Judge Robson, held claim 4 valid, and remanded both cases to the District Court for further proceedings. On January 14, 1965 Judge Robson entered an order "as directed by the Mandate of the Court of Appeals" holding claim 4 valid.

Devex instituted discovery on the venue question, but on April 20, 1965 decided to present a motion for transfer under 28 U.S.C.A. § 1406(a) (1948). Devex sought transfer to the District of Delaware. The motion was heard by Judge Robson on June 23, 1965, together with GM's motion to dismiss under 1406(a) and a further GM motion to vacate paragraph 1 of the Court's judgment order of January 14, 1965 in the event the transfer should be granted.[4] Judge Robson granted the plaintiff's motion for transfer and denied *both* of the defendant's motions.

On January 3, 1966 the plaintiff filed the instant motion for summary judgment. Devex contends that the validity of the patent has been established, and that the January 14, 1965 judgment of the Illinois District Court remains bind-

other than to dismiss the case, would be without jurisdiction.

"That is the chance the plaintiff is taking. I have not seen the patent yet. I am not going to attempt to try the case on a motion to dismiss.

* * * * *

"I am just telling you that I have been thinking about it a long time. Since you are both here I would like to tell you right now. I am not sure you should thank me. If there is no showing to prove infringement in this district you won't have an adjudication."

By way of expanding Judge Barnes'

gree of use required to establish proper venue is of a lesser order of magnitude than that required to establish infringement for liability purposes. Watsco, Inc. v. Henry Valve Co., 232 F.Supp. 38 (S.D.N.Y.1964). If *Watsco* is correct then the fact that the plaintiff fails "to prove infringement" within the forum district at trial may not "deprive him of an adjudication" with respect to infringement in other districts.

4. The January 14, 1965 order, it will be recalled, was Judge Robson's entry of final judgment of validity.

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upon the defendant. The plaintiff further contends that GM's answers to interrogatories 2–5 and 12 constitute admissions of infringement. Accordingly, the plaintiff argues for the entry of summary judgment on the grounds that no further issues remain for adjudication between the parties.

GM resists the motion on two grounds: first, GM argues that the question of validity has not been determined because the January 14th order is ineffective for want of proper venue; second, GM denies that its answers to interrogatories admit infringement.

Plaintiff's argument that the validity issue has been settled rests upon the premise that GM has waived its venue defense. In support of this essential premise the plaintiff cites Neirbo Co. v. Bethlehem Shipbuilding Corp., 308 U.S. 165, 60 S.Ct. 153, 84 L.Ed. 167 (1939) (Frankfurter). *Neirbo* stands for the proposition that venue is something less than an absolute right; it is a privilege intended for the convenience of the litigant which may be waived by conduct inconsistent with the assertion of the privilege. Specifically *Neirbo* holds that the designation of a statutory agent for service of process in order to qualify a foreign corporation to transact business in the state constitutes a waiver of venue in any subsequent federal court proceedings. However, *Neirbo* cannot be construed to make the act of participation in court proceedings following a timely venue objection a waiver. Professor Moore, in discussing Rule 12 of the Federal Rules, clarifies any possible confusion:

"Under the former practices, both at law and in equity, a party could, by proper procedure, raise the defenses (1)–(5), and losing thereon proceed to litigate on the merits, and losing on the merits appeal, and attack the judgment, both on the merits and on such grounds (1)–(5) as he had urged. Thus a judgment on the merits for the plaintiff would be set aside, when the defendant had properly challenged * * * that the venue was improper and [that] the lower court was in error in denying his defense. Rule 12(b) does not change that rule." 2 Moore Federal Practice ¶ 12.12 (2d ed. 1965).

[3, 4] Although the defendant's appearance and defense on the merits do not constitute a waiver of the venue objection timely made, GM's subsequent conduct did amount to such a waiver. Having prevailed on the merits before Judge Robson, GM permitted Judge Robson to enter judgment in its favor, despite the language of the Judge's own order of consolidation which assured GM that the venue matter would be considered *before* entry of judgment on the validity question. There is no record objection on the part of GM to Judge Robson's departure from the procedure outlined in his order of consolidation. One can only assume that GM condoned, indeed applauded, the entry of judgment. Also, despite Judge Barnes' denial of GM's motion to dismiss for improper venue, GM neglected to take a cross-appeal to the Seventh Circuit in order to present to that tribunal its venue contentions.[5] GM's condoning of Judge Robson's departure from his own order, and its failure to take a cross-appeal on the venue matter were fatal. This Court holds that GM waived its venue rights before Judge Robson. The transparency of GM's conduct is apparent. By arguing before the Seventh Circuit for affirmance of Judge Robson, GM sought to preserve a judgment which would operate as res judicata in any subsequent actions between the parties. GM's strategy, having succeeded on the merits, was to discard its venue contentions which, even should they prove successful, would not be as efficacious as a judgment on the merits.

This Court's holding that the failure to take a cross-appeal constituted a waiver of venue objections is not an unprece-

Judge Barnes' denial of GM's motion to ... and Judge Robson's entry of ... solved GM's venue contentions, presented

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dented one. Peoria & Pekin Union Ry. Co. v. United States, 263 U.S. 528, 44 S.Ct. 194, 68 L.Ed. 427 (1924) (Brandeis). In *Peoria* the plaintiff brought an action in the Southern District of Illinois against the United States to enjoin the enforcement of an order of the ICC. The proper venue for the action was the District of Iowa, and the United States made timely objection to the Illinois venue. The objection was overruled and the United States prevailed on the plaintiff's motion for a temporary injunction. The plaintiff appealed the denial of the motion for a temporary injunction; the United States failed to take a cross-appeal on the venue point. The Supreme Court held the United States' neglect was fatal.

> "The provision that suit shall be brought in the district of the residence of the party on whose petition the order was made is obviously one inserted for his benefit. If there were a lack of jurisdiction in the District Court over the subject matter, we should be obliged to take notice of the defect, even if not urged below by the appellee. [Citation omitted] But the challenge is merely of the jurisdiction of the court for the particular district. The objection is to the venue. [Citation omitted] This privilege not to be sued elsewhere can be waived * * *. The United States was * * * entitled to insist upon compliance with the venue provision, and its objection was properly taken below. But, by failure to enter a cross-appeal from the court's action in overruling its objection, the right to insist upon it here was lost." 263 U.S. at 535–536, 44 S. Ct. at 196.

The GM rejoinder to the *Peoria* case is that there the venue contentions of the United States had been fully heard and disposed of, laying the foundation for an appeal, whereas in the present case GM contends there has been no consideration of the venue question. GM overstates its case. Judge Barnes had denied a venue objection early in the case. And further, entered a judgment in GM's favor without first handling the venue objection. Judge Robson's conduct in entering a judgment presumes venue, because, to turn GM's argument back upon itself, if venue had been wanting there could be no entry of a valid judgment—despite the fact that it went in GM's favor. Thus GM did have a sufficient foundation from which to take a cross-appeal.

Having been reversed on appeal GM sought to reinstate its venue objection before Judge Robson on January 14, 1965 at the hearing regarding the entry of a judgment of validity. Judge Robson severed the GM case from the Houdaille case and his order seems to contemplate giving GM a second chance to urge their venue objection.

GM never got that chance. On June 23, 1965, at oral argument, Judge Robson granted the § 1406(a) transfer to Delaware. In granting the transfer Judge Robson denied the defendant's motion to dismiss; he felt that transfer was the better alternative to conserve judicial effort.

> "While ordinarily a motion to transfer coming this late in litigation would be frowned upon, yet where there was the separation of issues with trial on on validity, there has been no loss of time."

Clearly, if the existing validity determination were to be void, there would have been a great loss of time, and a transfer to a District where the case would have to be recommenced would be wasteful.

Judge Robson's comments from the bench indicate that his action in transferring the case stemmed from a desire to avoid a legal hassle about whether "experimental use" of an infringing product would be sufficient to lay venue in the Northern District of Illinois. Judge Robson's comments about conserving judicial energy and avoiding added issues when viewed in context, support the view that Judge Robson anticipated that the Court would eschew any reconsideration

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Finally, and perhaps most significant-
, Judge Robson denied the defendant's
tion to strike paragraph 1 of his Janu-
14, 1965 order holding the patent
. If, as GM maintains, Judge Rob-
's transfer acknowledged the lack of
over GM, then the proper course of
would have been for Judge Robson
revoke the judgment insofar as GM
concerned. Judge Robson's express
ial of just such an order bespeaks his
erstanding that the validity deter-
ation would be accepted by this Court
the law of the case.

[5,6] Conceptually, however, the
ure of the case is distressing. If
e was waived, and this Court holds
it was, then transfer to this District
ld have been made under 28 U.S.C.A.
404(a) (1948), rather than under §
(a). This inconsistency permits of
remedies. Either this Court may re-
fer on its own motion on the ground
a § 1406(a) motion would not lie;
this Court may accept the transfer
treat it as having been made under
proper statutory authority—§ 1404
. Expediency and comity dictate the
course of action. Gulf Research &
lopment Co. v. Schlumberger Well
ying Corp., 98 F.Supp. 198 (D.Del.
) (Leahy, C. J.), mandamus denied
m. Gulf Research & Development
. Leahy, 193 F.2d 302 (3d Cir.
), aff'd, 344 U.S. 861, 73 S.Ct. 102,
Ed. 668 (1952).

Gulf Research is a much cited
ent which admonishes against re-
fers. The rationale is that courts
ordinate jurisdiction should not
an essentially appellate function
as upon the correctness of discre-
y transfer orders. As Judge Leahy
y put it:

"Regardless of my own view as to
ther the California Court was right
s interpretation of §§ 1391(c) and
1400(b), and, admittedly, there is seri-
ous conflict as to the proper interpre-
tation of those sections, I do not think
it meet or proper that I review Judge
Harrison's decision on the merits. To
do so would be a usurpation of an ap-
pellate function; * * *. * * * It
is now for an appellate court—not for
me—to correct any error, if error there
be, in his opinion. It is not only the
principle of comity and the fact that
Judge Harrison's opinion may be
likened, at this stage, to the 'law of this
case' which compels me to this conclu-
sion, but, what seems of most impor-
tance to me are considerations for the
orderly functioning of the judicial
process." 98 F.Supp. 200–201.

[8] Mindful of Judge Leahy's coun-
sel, this Court declines to retransfer the
case to Illinois. The Court holds that
venue was waived in Illinois, and intends
to apply the validity determination of the
Seventh Circuit as the law of the case.

> "Where a case has been decided by
> an appellate court and remanded, the
> court to which it is remanded must pro-
> ceed in accordance with the mandate
> and such law of the case as was estab-
> lished by the appellate court." 1B
> Moore, Federal Practice ¶ 0.404 [10]
> (2d ed. 1965).

Applying Professor Moore's teaching to
the facts of this case, the validity issue
was set to rest by the Seventh Circuit,
and was binding upon Judge Robson as
the law of the case in subsequent pro-
ceedings. It has been recognized by com-
mentators that, as far as transferee
courts are concerned, the law of the case
doctrine applies to rulings on points
other than the actual transfer. With re-
spect to such questions other than trans-
fer the transferee court takes the case in
the same posture as if it had not been
transferred.[6] Accordingly, if the valid-
ity determination of the Seventh Circuit

Moore, Federal Practice ¶ 0.404[8]. The issue is somewhat different, how-
, when the transferee—district
asked to reconsider a ruling
case had not been transferred. Ordi-
narily one judge does not consider a
point previously decided by another
judge of co-ordinate jurisdiction and

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bound Judge Robson then this Court is similarly bound.

[9] One final argument which lends support to the Court's conclusion that the law of the case doctrine should be applied to preserve the validity determination of the Seventh Circuit is the fact that here a full dress trial and appeal of the question have been had. Concededly, the law of the case doctrine is not a limitation upon a court's power. However, courts should be even more constrained to transgress the doctrine where a full trial and appeal of the question, involving a substantial investment of judicial energy, have occurred. See 1B Moore, Federal Practice ¶ 0.404[4] (2d ed. 1965). Cf., Dalzell v. The St. Nicholas, 109 F.Supp. 595 (S.D.N.Y.1951).

[10] There is an alternative route by which the validity determination of the Seventh Circuit may be preserved without altering the authority for the motion from § 1406 to § 1404(a). Assuming *arguendo* that the Illinois court lacked venue, it did not lack the *power* to deal with the defendant's substantive rights. Goldlawr, Inc. v. Heiman, 369 U.S. 463, 82 S.Ct. 913, 8 L.Ed.2d 39 (1962) (Black). In *Goldlawr* the Supreme Court condoned a § 1406(a) transfer from the Eastern District of Pennsylvania to the Southern District of New York where the transferor court *lacked personal jurisdiction* over the defendants. The transfer was to avoid the running of the statute of limitations. Mr. Justice Harlan's stinging dissent assures us that the issue was squarely before the majority:

> "The notion that a District Court may deal with an *in personam* action in such a way as possibly to affect a defendant's substantive rights without first acquiring jurisdiction over him is not a familiar one in federal jurisprudence." 369 U.S. 467–468, 82 S.Ct. 916.

The majority saw no reason why the fact situation did not present an appropriate occasion for the invocation of § 1406(a)'s transfer power. The purpose "whatever obstacles may impede an expeditious and orderly adjudication of cases and controversies on their merits. * * * If by reason of the uncertainties of proper venue a mistake is made, Congress, by the enactment of § 1406(a), recognized that 'the interest of justice' may require that the complaint not be dismissed but rather that it be transferred in order that the plaintiff not be penalized by what the late Judge Parker aptly characterized as 'time-consuming and justice-defeating technicalities.'" 369 U.S. 466–467, 82 S.Ct. 916.

In this particular case Judge Robson invoked § 1406(a) for precisely the same reason, to avoid that waste of judicial effort which would have attended a dismissal and recommencement of the case. Further, in this case, unlike *Goldlawr* the Northern District of Illinois had personal jurisdiction of the defendant. The rationale of *Goldlawr* may be felicitously applied in the present case to avoid the tedious reconsideration of issues fully and effectively litigated by the parties in the transferor forum. To refuse to follow the Seventh Circuit's determination would unnecessarily prolong a case which has already aged ten years.

Having accepted the first premise of Devex' motion, that the patent is valid, it remains for the Court to consider whether there remain any material issues of fact with respect to infringement. The patent in suit relates to the lubrication of metal for drawing and forming operations. Specifically, the patent calls first for the application of a phosphate coating to the metal, and the superimposition thereon of a fixed film containing a solid meltable organic material which in turn contains a solid inorganic compound with a melting point below that of the phosphate. The coating and fixed film lubricant permits the execution of drawing operations with a minimum of abrasion either of the material being drawn or the dies used in the drawing.

The defendant, GM, purchases [illegible]

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from the Parker-Rustproof Company. These materials are used in its drawing operations. Plaintiff alleges that these lubricants, when superimposed upon a phosphate coating, infringe claim of the patent. Devex contends the infringement is admitted by GM's answers certain interrogatories. Summary judgment is thought to be a suitable remedy because, based on similar answers to interrogatories, Judge Robson granted summary judgment in the companion case against Houdaille.

[11-14] However, this case is in a very different posture from the companion Houdaille case. Here the case has been transferred to another District. The parties are before another court, which lacks the benefit of having heard the testimony on validity. It is well-established that the extent of the prior art determines the scope of the proffered invention, and that any claims of infringement must be viewed against the backdrop of the prior art.[7] Further, the construction of a claim when its validity is contested controls the construction of that same claim when its infringement is alleged. The patentee cannot urge a restrictive interpretation of his claim to avoid invalidity and then an expansive interpretation to ensnare infringers.

[15] The doctrines set forth above are especially important when the defendant is charged with infringement with respect to a process which does not explicitly overlap the patent and which may exhibit salient differences from the patentee's process. Specifically, before the Seventh Circuit Devex relied heavily upon a series of tests run by one Friedberg to demonstrate its patent's improvement over the prior art. The Friedberg draws involved draws conducted under high pressures involving severe deformation of the metal, whereas the GM operation involves much lower pressures. And Henricks, the patentee, himself stated that it is a high pressure operation generating sufficient heat to thaw the meltable pigment which forms a part of his invention. The Court requires the aid of expert testimony to determine whether these differences are, or are not, important. Likewise, the patentee's invention is said to consist in part in its ability to avoid the formation of water insoluble compound—zinc stearate—which impedes the cleaning process after the draw is completed. To achieve this result the patentee employed a compound containing sufficient borax—the solid inorganic compound—to emulsify the zinc stearate. Infra-red tests conducted at the behest of GM demonstrated the presence of significant amounts of zinc stearate in those GM operations which Devex contends infringe the patent. Absent a trial the Court is unable to conclude that these differences are insignificant.

[16, 17] The plaintiff, in its "Reply to Defendant's Brief in Opposition to Plaintiff's Motion for Summary Judgment," contends that such factors as the formation of zinc stearate are irrelevant. The plaintiff would have the Court hold that the application of a soap and borax film over a phosphate coating, regardless of the manner in which these constituents operate to facilitate the drawing process, constitutes infringement. In support of this position the plaintiff cites a series of cases which hold that the inventor does not have to understand the scientific principles by which his invention operates.[8] These cases are inapposite. Although the "theory" is not prerequisite to patentability, it is important when scrutinizing for infringement. If an allegedly infringing process

[7] e. g., Huntman Stabilizer Corp. v. General Motors Corp., 144 F.2d 963 (3d Cir. 1944), cert. denied, 323 U.S. 782, 65 S.Ct. 271, 89 L.Ed. 624.

[8] Cf. Diamond Rubber Co. v. Consol. Rubber Co., 220 U.S. 428, 435-436, 31 S.Ct. 444, 447, 55 L.Ed. 527 (1911). "And merit that he may not know all of the forces which he has brought into operation? It is certainly not necessary that he understand or be able to state the scientific principles underlying his invention, and it is immaterial whether he can stand a successful examination as to the

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falls within the literal language of the claim, but can be shown to operate in a different manner from the patented process then there is no infringement. Specifically, in the present case the patent teaches the application of a soap and borax solution over a phosphate coating. The patent was granted over the prior art German process because of Henricks', the patentee's, contentions that the patent represented a significant advancement in the art since it eliminated the formation of water insoluble compounds such as zinc stearate. The essence of Henricks' invention was the improved "cleanability" offered by his process.[9] If the GM tests be believed then the GM process cannot infringe because it presents the same cleaning problems found in the art prior to the Henricks' patent.

[18] In conclusion, the Court believes that to exercise its discretion and grant summary judgment would be most unwise because of the existence of what appear to the non-technical mind to be genuine and significant issues. It may well be that what the Court perceives to be significant issues will turn out to be unimportant after a full trial. Regrettably, the Court has not had the benefit of having heard the testimony concerning validity, and must, perforce, approach the infringement issue cautiously. That some factual ground will have to be retraced is the inevitable result of the parties having sought transfer at the later stages of a complicated litigation. Such a course should generally be avoided, especially in patent cases, because of the inevitable duplication of judicial effort required to educate the transferee court in the patent technology.

In accordance with the foregoing opinion, the plaintiff's motion for summary judgment is denied.

Submit order.

9. Henricks testified in his deposition of April 28, 1960:

"That is one of the differences, as I see it, between my invention and the prior art. In other words, I did not put forth any reaction such as zinc stearate." p. 49

The Court of Appeals for the Seventh Circuit made this one of their reasons for rejecting the argument that claim 4 was anticipated by the prior art:

tween the soap, borax and phosphate occurred during the drawing process. Friedberg's tests showed that in the Henricks' process, new compounds are formed; *the formation of insoluble organic compounds is inhibited*, and the abrasive phosphate is transformed into a glassy amorphous compound having highly effective lubricating properties." Devex Corp. v. General Motors Corp., 32 F.2d 234, 237 (7th Cir. 1963).

DEVEX CORPORATION et al.,
Plaintiffs,

v.

GENERAL MOTORS CORPORATION,
Defendant.

Civ. A. No. 3058.

United States District Court.
D. Delaware.
Sept. 8, 1970.

Action was brought for patent infringement. The District Court, Caleb M. Wright, Chief Judge, held that plaintiffs, asserting infringement of claim four of Reissue Patent No. 24,017, relating to lubrication of metal surfaces in cold drawing and deforming operations in shaping steel to desired forms by dies, failed to show by a preponderance of evidence that accused processes achieved same new and unexpected results which formed basis for upholding validity of claim.

Judgment for defendant.

1. Patents ⇐314

In making findings of fact in patent infringement action involving mass of technical data and analysis, court is not conducting laboratory analysis but is applying a legal judgment to evidence before it and making a determination whether the facts are proved or not proved and whether the party who has burden on given issue has sustained it or not.

2. Patents ⇐312(3)

Finding in patent infringement action against party with burden does not require absolute conviction that opposing party has proved contrary case.

3. Patents ⇐312(3)

Patentees had burden of proving patent infringement by a preponderance of evidence.

4. Patents ⇐157(1)

Construction of claim when its validity is contested controls construction of that same claim when its infringement is

5. Patents ⇐328(4)

Reissue Patent No. 24,017, relating to lubrication of metal surfaces in cold drawing and deforming operations in shaping steel was not infringed by the defendant's processes.

6. Patents ⇐312(3)

Plaintiffs, asserting infringement of claim of reissue patent relating to lubrication of metal surfaces in cold drawing and deforming operations in shaping steel to desired forms by dies failed to show by a preponderance of evidence that accused processes achieved same new and unexpected results which form basis for upholding validity of claim.

David F. Anderson, of Potter, Anderson & Corroon, Wilmington, Del., Walter J. Blenko, Frederick B. Ziesenheim, and Arland T. Stein, of Blenko, Leonard & Buell, Pittsburgh, Pa., of counsel, for plaintiffs.

Thomas S. Lodge, of Connolly, Bove & Lodge, Wilmington, Del., George N. Hibben, of Hibben, Noyes & Bicknell, Chicago, Ill., Neal A. Waldrop, of Harness, Dickey & Pierce, Detroit, Mich., and William S. Pettigrew, Detroit, Mich., of General Motors Corp., of counsel, for defendant.

OPINION

CALEB M. WRIGHT, Chief Judge.

This is an action for infringement of Claim Four of Reissue Patent No. 24,017. It has been tried on the merits without a jury and the Court has heard posttrial argument.

DISCUSSION

Claim Four is now the creature of judicial construction. Its validity was saved by a narrow reading in the Court of Appeals for the Seventh Circuit in Devex v. General Motors, 321 F.2d 234 (7th Cir. 1963), applied here as the law of the case, Devex v. General Motors, 263 F.Supp. 17, 23–24 (D.Del.1967).[1] It is not the law, and the premise has not been seriously advanced, that proof of literal infringement would entitle plaintiffs to a judgment.

In reversing the lower court decision that the process was unpatentable because obvious from the prior art, the Court of Appeals relied on evidence that "new and unexpected results flow from the conjunction of the elements defined in the drawing process * * *." 321 F.2d at 237. The new and unexpected results are not found in the language of the claim, but they are now its essence. Similar processes with different results do not infringe. This Court said in an earlier opinion, "If an allegedly infringing process falls within the literal language of the claim, but can be shown to operate in a different manner from the patented process, then there is no infringement." Devex v. General Motors, 263 F.Supp. 17, 25, 26 (D.Del. 1967).[2] Plaintiffs were obliged, therefore, to show by a preponderance of the evidence, that the accused processes duplicated the critical results.

As in many patent cases, the Court found itself confronted with a mass of technical data and analysis. The evidence consisted largely of tests prepared by experts for each side in preparation for litigation. The test results and expert conclusions are conflicting, as might be expected, and, even to a layman, it appears that objectivity, the unremitting master of every laboratory, has not always been a fixed star in the inquiry conducted and presented to the Court. Although the errors, mostly of omission, seem to have occurred from negligence in the pursuit of proof rather

1. See also Devex v. Houdaille Industries, 382 F.2d 17, 22-23 (7th Cir. 1967).

2. In Devex v. Houdaille Industries, 382 F. 2d 17, 22-23 (7th Cir. 1967), plaintiffs contended that the claim should be applied literally to the accused process. The court said in response, "Such a construction would monopolize the whole broad field of metal forming with any use of a dry soap and borax over phosphate at any temperature or pressure, regardless the results."

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from bad faith or fraud, their pres- has compounded the burden of one killed in the technology attempting reach a correct result.

[1,2] Because the issues are vigor- disputed by learned men of science, outcome depending entirely on which analyses, and explanations the court adopts, it is well to recall, as did Kirkpatrick, "that we are engaged the determination of a dispute between parties in a court of law, rather than an excursion into the realm of scien- research, and we must approach the tion from the standpoint of the rules which the law has established for re- the controverted issue." Shi- v. Electric Storage Battery Co., F.Supp. 42, 52 (E.D.Pa.1936). In findings of fact, the Court is conducting laboratory analyses, but a legal judgment to the evidence it. It is making a determination facts are proved or not proved, that party who has the burden on a given has sustained it or not. A finding the party with the burden, as the makes here, does not require ab- conviction that the opposing party proved a contrary case. Any other would require judges to know about the technology of a patent the experts whose disagreement the dispute to court.

Plaintiffs were obliged to prove that action occurs in the accused processes the soap, borax and phosphate at temperatures and pressures, caus- new compounds, including but not to glassy amorphous compounds, formed, and inhibiting the forma- of water insoluble compounds. results were demonstrated by plaintiffs' witness Henry Friedberg and on by the Court of Appeals to the claim's validity. 321 F.2d 24. This Court heard nineteen days testimony, which comprised most the expert opinion relied on by the It has reviewed the evidence and the exhibits offered to it and to the courts which considered validity, and it concludes that plaintiffs have not met their burden in establishing the essential results. The Court has no doubt that defendant's processes are effective, beneficial and an improvement over earlier solutions to their lubricating problems, nor that they utilize some of the learning upon which the patent is based. Use of that learning is not actionable, however, unless it produces the critical results.[3]

THE NEW COMPOUNDS

Plaintiffs' expert Henry Friedberg was again a key witness at the infringement trial. Plaintiffs relied almost solely on his tests and analyses to show that the new compounds are formed in the accused process. The Court was not comfortable, however, with Friedberg's reliance on his earlier experience with tests on the patented process to justify shortcuts in analysis of the accused ones. He failed to repeat his tests on the accused processes, to develop any standard charts, and to make any tests on the accused process without borax; he was quick to accept minimal evidence to identify the purported new compounds. His conviction was no substitute for the doubts implanted by probing crossexamination, and the Court was unpersuaded that the coaction occurred and new compounds formed even before defendant began its case.

The testimony of Dr. Martin Buerger concluded the issue. Dr. Buerger was a convincing witness, confident in his methods and his conclusions yet honest in their limitations. He found no evidence of the new compounds identified by Friedberg, and plaintiffs did little to shake the strength of his testimony. His conclusions were in accord with the findings of defendant's other expert, Dr. Cheever, and although Dr. Cheever lacked the confident demeanor and commitment to objectivity displayed by Dr. Buerger, that they should agree on this point is

the proportion of borax for the example, is taught by the prior art. While

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significant, and it strengthens the finding that defendant's evidence was on the whole more convincing.

AMORPHOUS COMPOUNDS

Plaintiffs relied on the results of Friedberg's X-ray charts to establish the existence of the glassy amorphous compounds supposedly produced by the coaction. It is undisputed however, that in most cases such compounds are not discoverable, much less identifiable by X-ray analysis. Friedberg admitted that the basis for his conclusion, the flattening out of the tracings, could be due to the wiping action of the deformation process. The Court could not conclude that the amorphous compounds were present when the only evidence was a test not designed to disclose them.

WATER INSOLUBLE COMPOUNDS

The debate centered around zinc stearate, since it was that substance which was created by the prior art German process and the inhibition of which Henricks, the patentee, specifically claimed as an advance. On this issue again, there was no reason to disbelieve Friedberg's statement that he found no zinc stearate, but his failure to identify, or even to search extensively for, the peaks at the low angles was unsettling. When defendant's explanation that the low angle peaks actually represent a type of basic zinc stearate, admittedly not recorded in the ASTM files but chemically logical nevertheless, was presented, the Court found itself in a quandary.

Although Friedberg discovered upon reexamination that the mysterious peaks corresponded to those for barium stearate given in the ASTM files, plaintiffs did not present a chemical analysis of the substance either as produced by defendant or as found in residue after boiling a workpiece. The innuendoes that defendant had created a new substance and was being less than honest about its composition were not supported by proof, and the Court would not son to doubt credibility or to [illegible] fraud appeared. Defendant had at lea a standoff, and the plaintiffs, havin the burden on the issue, must suffer th facts to be found against them.

Having found these three groups facts, as well as others not discus herein, against the plaintiffs, the Cou must enter a judgment for defenda and will do so upon submission of proper order.

The foregoing and the findings of fa and conclusions of law which follow a made in compliance with Rule 52(a Fed.R.Civ.P., 28 U.S.C.

FINDINGS OF FACT

1. The plaintiffs herein are as f lows:

Devex corporation, an Ohio corpo tion located at Lakewood, Ohio;

Technograph, a North Carolina cor ration having its principal place of bu ness at 920 Northwest Boulevard, W ston-Salem, North Carolina;

William C. McCoy, now deceased citizen of the State of Ohio residing 2712 Claythorne Road, Shaker Heig Ohio;

Theodore A. TeGrotenhuis, a citi of the State of Ohio residing at 7 Columbia Road, Olmsted Falls, Ohio;

Frederick B. Ziesenheim, a citizen the Commonwealth of Pennsylvania siding at 355 Woodside Road, P burgh, Pennsylvania, and one of the torneys of record for plaintiffs in action;

Marjorie E. TeGrotenhuis, a citize the State of Ohio residing at Columbia Road, Olmsted Falls, Ohio

William C. McCoy, Jr., a citizen o State of Ohio residing at Shaker B vard, R. D. #3, Chagrin Falls, Ohi

Katherine M. Bassett, a citizen o State of Connecticut residing at 2 Ridge Lane, Darien, Connecticut.

2. Defendant General Motors C ration, is a Delaware corporati

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1. The patent in suit is the outcome of an application, Serial No. 665,905, filed April 29, 1946, by the patentee Henricks. This application was abandoned in favor of a continuation-in-part application filed October 31, 1950, which issued as United States Patent No. 2,588,234, dated March 4, 1952. Application for reissue of Patent No. 2,588,234 was filed March 1, 1954 and on June 7, 1955, issued as Patent No. Reissue 24,017 now in suit. PTO 1-2.

2. Plaintiff Technograph holds all rights in and to Henricks Patent Re. 24,017 save for bare legal title which remains in the individual named plaintiffs. Plaintiff Devex has remained solely to this action by virtue of certain reversionary rights. PTO 1, 2.

3. Only Claim 4 of the Henricks Patent No. Re. 24,017 is charged to be infringed by defendant in this action. Said claim is as follows:

"The process of working ferrous metal which comprises forming on the surface of the metal a phosphate coating and superimposing thereon a fixed film of a composition comprising a solid meltable organic binding material containing dispersed therethrough a solid inorganic compound meltable at a temperature below the melting point of the ferrous metal phosphate of said coating and having a hardness not exceeding 5 on the Mohs' hardness scale, and thereafter deforming the metal."

4. This patent infringement action was originally filed on November 13, 1956 in the United States District Court for the Northern District of Illinois under Civil Action No. 56-C-1912. A similar action was filed against Houdaille Industries in the same Court on May 29, 1957, under Civil Action No. 57-C-[illegible]. These Civil Actions Nos. 56-C-1912 and 57-C-892 were consolidated for trial on the issue of validity of Claim 4 of the Henricks Patent No. Re. 24,017. After trial, Judge Edwin A. Robson held Claim 4 of Henricks Patent No. Re. 24,017 invalid. On appeal, the Court of Appeals of the Seventh Circuit reversed and held Claim 4 valid, 321 F.2d 234. After remand, and on plaintiffs' motion, the case as to General Motors was transferred to the District of Delaware on July 16, 1965. The issues are raised in the Amended Complaint filed July 17, 1968 and in the Answer to the Amended Complaint filed August 19, 1968.

7. On January 16, 1967, this Court, by an opinion reported at 263 F.Supp. 17, denied plaintiffs' motion for summary judgment on the infringement issue.

8. Plaintiffs charge that the following metal forming processes of defendant infringed Claim 4 of the Henricks patent as held valid by the Court of Appeals of the Seventh Circuit. PTO 3-19.

A. *Pontiac Bumper Forming Process* PTO 3-10

(1) During 1955 and 1956 prior to commencement of this action, defendant at its Pontiac Motor Division plant formed automobile bumpers in progressive dies after Spra-Bonderite 111X had been applied to form a phosphate coating and after Bonderlube 246 had been applied in a dilute solution to the phosphate coating and dried. PTO 3.

(2) Spra-Bonderite 111X was an acid zinc phosphate solution containing 12.0% Zn, 9.3% NO_3, 29.2% PO_4, and the balance water. The Bonderlube 246 in its dry state contained 15% borax and the balance sodium stearate-sodium palmitate soap. PTO 3.

(3) After flat steel blanks had been polished on one side to the finish desired on the bumper part prior to electroplating, and after the polished blanks had been spray cleaned in a Parco No. 341 cleaning solution and rinsed in hot water, Spra-Bonderite 111X phosphating solution was sprayed onto the blanks at a temperature of about 140° F to 150° F for 50 seconds. The phosphating step was then followed by cold and hot water spray rinses. PTO 4-5.

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(4) The phosphate coated blanks were then rinsed in a hot solution of Parcolene 21 and water, and the excess solution thereafter removed from the surface with rubber squeegee rolls. Parcolene 21 in its dry state is 90% borax and 10% sodium nitrite and the Parcolene solution is made by mixing 2 pounds of Parcolene 21 with 100 gallons of water, Parker Specification No. 96, PX 60. PTO 5.

(5) A solution of Bonderlube 246 in water was then roller coated onto the phosphate coated blank at a temperature of approximately 190° F. The Bonderlube solution was prepared for coating and replenished during coating in accordance with the Parker Rust Proof Specification No. 113, PX 61, wherein 100 pounds of Bonderlube 246 were mixed with 100 gallons of water. PTO 5.

(6) The coated blanks were then passed through an infrared drying oven maintained at an interior air temperature of 425° F for a period of 20 seconds to remove the water and form a dry film on the blank. This completed the coating operation in preparation for cold forming the bumper parts. PTO 5.

(7) The bumper parts comprised the front bumper lower impact bar (Part No. 521374), the front bumper bomb guards (Part Nos. 521424–5, Assembly Part Nos. 521794–5), the front bumper impact bars (Part Nos. 521338–9, Assembly Part Nos. 521771–2), and the rear bumper cross bar (Part No. 518851, Assembly Part No. 518963). The blanks which had been previously subjected to the above-stated lubricating steps, were then formed into the final bumper configuration and also cut, trimmed and pierced in a continuous operation by a series of dies in separate presses. PTO 5–8.

(8) The metal used for the flat steel blanks was a low carbon steel SAE 1008 and 1010 having a thickness of .110 to .[illegible] inch. PTO 9.

(9) After being formed, the bumper parts were cleaned and prepared for electroplating as follows:

(a) The bumper parts were first passed through a three stage washer in which Wyandotte cleaner called Ferro (an alkaline solution) was sprayed on at a temperature of approximately 180° F. PTO 9.

(b) After drying, the bumper parts were inspected and hand polished, where necessary, to remove spot defects and burrs. PTO 9.

(c) Then the bumper parts were passed through a power washer in which they were sprayed with Wyandotte No. [illegible] alkaline cleaner at approximately 180° F. for about 3 to 3½ minutes. PTO 9.

(d) The bumper parts were then rinsed in hot water for about one minute. PTO 9.

(e) The bumper parts were then immersed for approximately 4 minutes in a McDermid cleaner at a temperature of 180° F. The McDermid cleaner included sodium hydroxide, trisodium phosphate and sodium carbonate. PTO 9.

(f) The bumper parts were then rinsed in cold water for approximately ½ minute, placed in an acid dip of 10% sulphuric acid by volume for ½ minute and then rinsed in cold water. PTO 10.

(g) After cleaning, the bumper parts were inspected for defects and, where necessary, spot polished by hand. PTO 10.

(10) The cleaning steps and cleaning materials and solutions used in cleaning the surfaces of the bumper parts after drawing and prior to electroplating, as above described in subparagraphs (a) to (f) of paragraph (9), were the same as those used in Pontiac's prior bumper forming process wherein a lubricant Mar-Proof, described as a "sticky gunk" or a "sticky gunk," was applied prior to forming. The cleaning steps and the same results in the BL 246 process as in the prior Mar-Proof process. PTO 10.

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Valve Lifter Plunger Process PTO 10–15

(1) Defendant commercially cold ed in an extrusion operation hy- lic valve lifter plungers from fer- metal slugs during 1955 and 1956 its Diesel Equipment Division prior commencement of this action. Prior extrusion, Bonderite 181X was ap- to form a phosphate coating on the and then Bonderlube 235 was ap- in a dilute solution to the phos- coating and dried. PTO 10–11.

2) Bonderite 181X was an acid zinc phate solution containing 13.6% 18.3% NO_3, 15.7% PO_4 and the bal- water. The Bonderlube 235 in its tate contained 3% borax, 2% sodi- nitrite, and the balance sodium ate soap. PTO 11.

3) After the slugs, which were of 1012 low carbon steel, had been ed, grit blasted and annealed to se- a hardness of approximately RB 50 tensile strength of 35,000 to 50,000 i, and after they had been dipped pickling bath and rinsed in hot , they were immersed for a period minutes in a Bonderite 181X phos- g solution which was maintained temperature of approximately 185° ° F, thus forming on and integral the surface a phosphate coating. 11–12.

The phosphate coated slugs, after water rinse, were then immersed e minute in a solution of Parco- t and water at room temperature. 12.

The phosphate coated slugs were fter immersed for a period of ap- ately 5 to 7 minutes in a solution derlube 235 and water maintained mperature of approximately 165° he Bonderlube 235 solution was d for coating and replenished coating in accordance with the Rust Proof Specification No. 96, wherein 56 pounds of Bonder- were mixed with 100 gallons

(6) The slugs were then dried to remove the water and form a dry film on the slugs. PTO 13.

(7) The slugs which had been previously subjected to the above-stated lubricating steps, were fed (2 slugs at a time) into a Verson circular dial feed press. The press had 12 stations, PX 81. With each stroke, it simultaneously loaded two slugs, sized two slugs to a cylindrical shape having a length of approximately 0.640 of an inch and a diameter of approximately 0.625 of an inch, extruded two slugs, pierced two slugs, coined two slugs and unloaded two slugs. The press production rate was 30 strokes (60 plungers) per minute. Upon unloading, the extruded plungers were approximately 1.180 inches long and 0.635 of an inch in diameter. PTO 13–14.

(8) After the press operations, the plungers were then cleaned in a single stage Detrex Rotary Drum washer, rotating on its horizontal axis, with advancing flights on the inner peripheral surface of the drum. As the formed plungers tumbled and advanced through the washer, Parco 532 cleaner (a mild acid type solution) was sprayed on them at a temperature of approximately 165° to 170° F, the spray solution forming a pool at the bottom of the washer. The parts were in contact with the cleaning solution for about 2 to 3 minutes. PTO 14.

(9) Prior to introduction of the above-designated procedures, the valve lifter plungers were machined from solid bar stock. PTO 14.

C. *Pontiac Rocket Forming Process* PTO 15–19

(1) Defendant cold formed in an extrusion process from metal billets rocket heads and rocket motor bodies for the United States Government at its Pontiac Motor Division plant during 1952 and 1953 after issuance of patent No. 2,588,234 on March 4, 1952. Prior to extrusion, Bonderite 180X was applied

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solution to the phosphate coating and dried. PTO 15.

(2) The steps generally followed in the production of the rocket head at Pontiac are recited in PX 87 and PX 88 and are pictorially shown in the photograph on page 1 of PX 91. PTO 15.

(3) After the metal billets had been cleaned, they were immersed for a period of approximately five minutes in a Bonderite 180X phosphating solution which was maintained at a temperature between 180° and 200° F, thus forming on and integral with the surface of the ferrous metal a phosphate coating. Bonderite 180X was an acid zinc phosphate solution and was prepared for coating in accordance with the Pontiac Process Specification, PX 88. PTO 15, 17–18.

(4) After a cold water spray rinse, the phosphate coated billets were sprayed with a solution of Parcolene No. 20 and water at a temperature between 160° and 180° F for ½ a minute. Parcolene No. 20 in its dry state is 66.6% borax and 33.4% sodium nitrite. The Parcolene No. 20 solution was prepared for coating in accordance with Pontiac Process Specification, PX 88. PTO 18.

(5) The phosphate coated billets were thereafter immersed for a period of 5 minutes in a solution of Bonderlube 235 and water maintained at a temperature between 180° and 200° F. The Bonderlube 235 solution was prepared for coating in accordance with the Pontiac Process Specification, PX 88. The billets were thereafter dried to remove the water and form a dry film on their surfaces. PTO 18–19.

(6) The process followed in defendant's production of rocket motor bodies is set forth to some extent in PX 89. It has been agreed by and between the parties that with regard to infringement, the findings of this Court with regard to the rocket head process shall be controlling and conclusive as to the rocket motor bodies. PTO 19.

9. Plaintiffs offered evidence to only embodied the process steps set forth in Claim 4, but also achieved the same new and unexpected results upon which the Court of Appeals relied to sustain validity. Devex v. General Motors, 321 F.2d 234 (7th Cir. 1963). Plaintiffs attempted to show, inter alia, that,

(a) there was a new coaction among the soap, borax and zinc phosphate at high temperatures and pressures resulting in the formation of the new compounds referred to by the Court of Appeals, 321 F.2d at 237;

(b) there was a new coaction between the borax and phosphate under high temperatures and pressures resulting in the formation of glassy amorphous compounds, 321 F.2d at 237;

(c) the formation of water insoluble compounds was inhibited and there was no cleaning problem, 321 F.2d at 237;

(d) tool and die life was greatly increased, 321 F.2d at 237;

(e) the use of soap-borax over phosphate spelled the difference between success and failure, 321 F.2d at 237;

(f) there was ferrous metal phosphate in the coatings as required by the claim.

Plaintiffs contended that the claim did not require the inorganic compounds (borax and sodium nitrite) to melt and offered evidence to show that they were *meltable* at a temperature below that of the phosphate. Defendant asserted that melting is required and relied on some of the plaintiffs' evidence and some produced from its own witnesses to show that the compounds did not and could not melt during its processes.

10. The plaintiffs have failed to prove by a preponderance of the evidence that new compounds are formed in defendant's accused processes by any action among the soap, borax and phosphate coating on the work piece.

(a) The plaintiffs submitted in evidence diffractometer charts PX 73 to PX 74 inclusive made by its X-ray diffraction witness Henry Fri[illegible]

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...unds. Friedberg testified (a) he did ...t repeat his X-ray diffraction tests, ...r. 539–40, to determine whether the ...aks he identified as including new ...mpounds were actual diffraction peaks ...presenting new compounds or random ...ckground irregularities; (b) he pre-...red no X-ray diffraction charts of the ...ased coatings without borax so as ... determine whether the peaks relied ...on in the charts PX 71–74 resulted ...m the presence of borax, Tr. 440–...A; (c) he made no standard charts ...the new compounds he claims to have ...nd so as to support his identifica-..., Tr. 578–79.

...b) At least three peaks of a dif-...ction pattern of a compound should ...found for reliable identification of a ...pound. Tr. 498–99, 1173–75, 1459. ...edberg was unable to point to more ...e one or two peaks of any ASTM ...g in the X-ray diffraction spectra ...ny one of the charts PX 71 through ...74 as identifying new compounds ...edly formed in defendant's accused ...esses. Tr. 420–22, 425–27, 431–33, ...36, 556–64; see testimony correc-...re PX 72 at 462.

...c) Friedberg selected 13 peaks in the ...tra of the charts as identifying new ...ounds. A majority of these peaks ...r at the same 2-theta angle locations ...inc phosphate peaks. Tr. 1450–58. ...phosphate constitutes a large por-...of the coating of the accused pro-..., Tr. 1294, and a satisfactory iden-...tion of a new compound by a peak ...e same 2-theta angle as zinc phos-...s peak cannot be made. Tr. 505, ...57. Other of the peaks selected ...riedberg on charts PX 71, 72 and 74 ...dentifying new compounds appear ...e of size and shape similar to the ...gs of the spectra caused by back-...d radiation. Tr. 1451–54, 1457–...PX 69. A chart of Bonderlube ...o borax) over phosphate has peaks ...e same 2-theta angles where boron ...unds were identified by Friedberg ...71 and PX 72. Tr. 570–71, 573–...e X-ray diffractometer charts and the testimony of the witnesses do not establish that new compounds are formed in defendant's accused processes by a coaction between the borax and the phosphate coating.

(d) Dr. G. D. Cheever, a chemist employed by defendant, testified that the patterns of peaks of the X-ray diffractometer charts of the accused BL 235 and BL 246 coatings do not reproduce and do not match the patterns of peaks of the standard zinc borate and boron phosphate X-ray diffractometer charts and patterns of peaks of ASTM sodium boron phosphate and all other possible boron compounds. Tr. 1353–72, 1402–14, 1459–61. No new compounds are formed in the accused processes before or during the drawing operations by any coaction between the borax and the phosphate.

(e) Defendant's witness Abram Davis, is an expert in infrared analytical techniques. Tr. 2083–85. The infrared patterns of his charts of the accused BL 235 coating, the TD–1286–Q coating (no borax) and the German process coating are substantially the same. Tr. 2088. There is no evidence in the BL 235 infrared chart indicating that new compounds are formed by any coaction between the borax and the phosphate. Tr. 2088.

(f) Dr. Martin J. Buerger testified as an expert in analyzing defendant's powder photographs of the accused processes. He is Professor Emeritus at Massachusetts Institute of Technology and Professor at the University of Connecticut. He has been engaged in the study of crystal structures and the use of X-ray diffraction for 38 to 40 years Tr. 1107–1123A, 1125; DX 361.

An advantage of an X-ray powder photograph over an X-ray diffractometer strip chart is that the bursts of radiation are integrated uniformly over the entire film and do not interfere with the resolution and intensity of the lines resulting from beams diffracted by compounds. Tr. 1657–58, 1166–68, 1170–71. The powder photograph method using the

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and machine for analyzing materials by X-ray diffraction. DX 376A–C.

The photographs were taken of samples prepared, in accordance with established practice, by removing the coatings as a powder from the supporting surfaces and placing the powder particles in a holder through which the X-ray beams were directed. Tr. 1490–91, 1493–94; DX 250. The removal of a powder sample from its substrate is a standard way of preparing a sample for a powder photograph and such removal does not change the characteristic diffraction pattern as to the location of the lines. Tr. 1174–75, 1774; DX 250.

The patterns of lines of the powder photographs of the accused Bonderlube 235 and Bonderlube 246 coatings do not reproduce and do not match the patterns of lines of the standard zinc borate and boron phosphate powder photographs, or the patterns of lines of the gauge strips of other ASTM boron compounds and compounds identified by Friedberg as new compounds. Tr. 1679–94, 1717–22, 1729–35. Also, the pattern of lines of the powder photographs of the accused BL 235 and BL 246 coatings are substantially identical with the patterns of lines of the reference powder photographs of the BL 232 (soap without borax) and BL 248 (soap without borax). Tr. 1688, 1717–22, 1729. No new lines which would indicate the possible formation of new compounds due to the presence of borax appear in the BL 235 and BL 246 photographs as compared to the BL 232 and BL 248 reference photographs. Defendant's powder photographs of samples of the accused processes and of samples of soap without borax are persuasive that no new compounds are formed in the accused processes before or during the drawing operations by any coaction between the borax and the phosphate.

(g) The necessary conditions for starting and continuing reactions to form new boron compounds are not present in defendant's accused processes. Tr. [illegible] high temperatures, above [illegible] (1100° F), a reaction time of several hours at such high temperatures, and high concentrations in the solutions.

(1) In none of defendant's processes do the coatings become heated to temperatures in excess of 600° C (1100° F). Tr. 79, 1481.

(2) The heating of the coating in defendant's processes occurs in a second or a fraction thereof and not over the period of hours required for a reaction. Tr. 1481.

(3) Defendant's processes involve only dilute solutions of BL 235 and BL 246 which do not contain high concentrations of reacting ions which must move through a system and come in contact with other ions to form new compounds. Tr. 1481.

(h) There was testimony that zinc borate may be formed out of a cold concentrated borax solution by adding zinc sulphate or zinc chloride. Tr. 25[illegible] However, defendant's solutions are dilute and do not contain zinc sulphate or zinc chloride. Tr. 2608; PTO 10, 18.

11. Plaintiffs have failed to establish by a preponderance of the evidence that glassy amorphous compounds are formed in the defendant's accused processes during the drawing operations.

(a) The evidence presented by plaintiffs analyzing samples of the coatings of the accused processes on the issue of whether glassy amorphous compounds are formed by any reaction of the borax and the phosphate coating were X-ray diffractometer charts PX 69 to PX [illegible] inclusive, and the testimony of plaintiffs' witness Friedberg with respect to those charts. Tr. 428, 523–531.

(b) Amorphous compounds are not crystalline and are not detectable by X-ray diffraction methods, the only analytical method pursued by plaintiffs for the glassy amorphous compound is [illegible] Tr. 523, 524, 528a, 529, 578.

(c) The reductions in the sizes of peaks and the smoother appearance of the spectra in X-ray diffraction [illegible] PX 72 (BL 248) [illegible] PX [illegible]

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…ples after the drawing operation as …pared to charts PX 71 (BL 246) and …X 73 (BL 235) of samples before the …awing operation do not establish that …assy amorphous compounds are formed …y a reaction of the borax with the …sphate coatings. Tr. 527–28, 531, …61–62. The pattern in X-ray chart …X 70 (BL 215, soap without borax, over …sphate after forming) is also smooth- …with lower peaks than the pattern of …X 69 (BL 215 over phosphate before …ming). Tr. 575–78. The reduction in …e of the peaks on PX 72 and PX 74 is …shown to have been caused by any ac- …n differing from that which occurred …n PX 70 and which must have been …action unrelated to the presence of bor-

…d) Defendant's X-ray diffraction ex- …t Dr. Cheever testified that reduction …the peak heights and the smoothing …n of the spectra in X-ray diffraction …rts PX 70, 72 and 74 of drawn sam- …occurs because during the drawing …ation the coating is spread over more …face area as the metal stretches and …s and some of the coating is wiped …y the dies, thereby leaving less ma- …l at any one area to diffract the X- …eam. Tr. 1461–62. Plaintiffs' wit- … Friedberg conceded that this wip- …action was possible and that peaks …disappear due to other reasons than …formation of amorphous compounds. …27–28, 531. There is no record evi- …e demonstrating that the reduction …e of the peaks on PX 72 and PX 74 …e to the action of the borax, rather …this wiping action.

… Plaintiffs' witness Friedberg was …e to identify by name or formula …particular glassy amorphous com- …d in the samples of the charts PX 72 …X 74 which he contended had been …d. Tr. 524, 528–29, 576–78. He …t distinguish the glassy amorphous …unds he contended were shown by … PX 72 and PX 74 from those he … were shown in PX 70 (no borax). …–78. Nor did he distinguish the …morphous compounds which he and PX 74 from the glassy amorphous compounds which the prior art Orozco-Henricks patent 2,469,473 (DX 1) discloses are formed by the use of a soap-borax lubricant over metal without phosphate during the drawing operation.

12. The plaintiffs have not established by a preponderance of the evidence that the formation of water insoluble organic compounds is inhibited by borax in the defendant's accused processes.

(a) Plaintiffs' X-ray diffractometer chart PX 74 shows that the borax does not inhibit the formation of water insoluble compounds in defendant's BL 235 process. Friedberg failed to recognize the presence of basic zinc stearate in his X-ray chart PX 74 of defendant's BL 235 process which is shown by a number of new high peaks formed at 2-theta angles 5.5, 8.2 to 8.4 and 11. Tr. 565–69, 1349–50. The peaks at those angles agree with the water insoluble basic zinc stearate peaks at the same positions in defendant's standard basic zinc stearate X-ray chart DX 313–II and their relative intensities are the same. Tr. 1349–50. Dr. Cheever identified the new high peaks in PX 74 as basic zinc stearate peaks. Tr. 1349–50.

(b) Plaintiffs did not make the test of boiling in water any samples of the accused processes to determine whether or not water insoluble organic compounds formed any part of the coatings thereof. Tr. 348–49, 586–87.

(c) The infrared patterns run by Davis of Hooker Chemical Corporation on samples of BL 235, TD–1286–Q (no borax) and the German process, all over zinc phosphate, showed a characteristic at the 1600 reciprocal centimeters band which was not in the infrared pattern of USP zinc stearate. Tr. 1900. Hooker's Miss Hartinger, a qualified analytical chemist, after a review of the literature, produced in May 1965 a basic form of water insoluble zinc stearate whose infrared pattern included a strong infrared band at 1600 and matched the patterns of the coatings of the BL 235, TD–1286–Q and the G… Tr.

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(d) A sample of Miss Hartinger's May, 1965 batch of water insoluble basic zinc stearate was used by Dr. Cheever in making his standard X-ray diffractometer charts, DX 313–I, II and III, and DX 317. Tr. 1908–09, 1336–37, 1398, 1566–67. A sample of basic zinc stearate from a second batch produced by Miss Hartinger in June, 1965 which also gave the same strong 1600 infrared band, Tr. 1912–13, was used as the water insoluble basic zinc stearate standard in making powder photograph MSU 5a (DX 256a). Tr. 1600.

(e) The Buerger powder photographs disclose that the pattern of lines of the water insoluble basic zinc stearate standard photograph (DX 256a) are matched by the patterns of lines in the BL 235 photographs (DX 260a, 257a) and by the pattern of lines in the BL 246 photograph (DX 261a) as well as by the patterns of lines in the BL 232 and BL 248 photographs (DX 262a, 264a) with no borax. Tr. 1671–77, 1723–24. The line patterns of basic zinc stearate in the photographs of samples of the accused BL 235 and BL 246 processes are the same as the line patterns of basic zinc stearate in the BL 232 and BL 248 photographs without borax. Tr. 1674–75, 1724. This matching of lines in the powder photographs indicates that water insoluble basic zinc stearate is formed in the coatings of the accused processes and that the presence of 3% borax or 15% borax does not inhibit its formation.

(f) Cheever's X-ray diffractometer charts disclose that the pattern of peaks with the same peak intensities and locations of the standard X-ray diffractometer charts (DX 313–I, II and III) of water insoluble basic zinc stearate prepared by Miss Hartinger, is reproduced in each of the spectra 3 to 9, inclusive, on X-ray chart DX 327 of samples of coatings of the accused BL 246 process and the BL 248 process (no borax). Tr. 1340–43. The pattern of peaks with the same peak intensities and locations of the standard X-ray diffractometer chart (DX 317) of basic zinc stearate prepared of the spectra 3 to 7, inclusive, on X-ray chart DX 320, of samples of coatings of the accused BL 235 process and the BL 232 process (no borax). Tr. 1394–1402. The matching of the basic zinc stearate patterns of peaks of the standard charts (DX 313, 317) with corresponding patterns of peaks in all spectra on charts DX 327 and DX 320 made from samples having BL 248 (soap only), BL 246 (soap-borax), BL 232 (soap only) and BL 235 (soap-borax) indicates that water insoluble basic zinc stearate is formed in the coatings of the accused processes and that the presence of 3% borax or 15% borax does not inhibit its formation.

(g) At the time of his early X-ray diffractometer charts of samples of the accused coatings, Dr. Cheever was unable to identify the basic zinc stearate peak because that material was not recorded in the ASTM listings. Tr. 1316–132 To determine whether a water insoluble compound was present in the coatings, he then boiled the accused samples in water and found that a whitish, waxy material was still present after boiling, which indicated that the whitish, waxy material was water insoluble. Tr. 1318. Chemical analysis of this boiled material determined that it contained zinc, carbon, hydrogen and oxygen, the elements of zinc stearate. Tr. 1320–21, 1517. X-ray diffraction charts (DX 318–I and show that the pattern of peaks of a boiled BL 235 sample closely matched the pattern of peaks of USP zinc stearate the ASTM listing and no longer matched those of an unboiled sample. Tr. 13 20, 1323–27. Boiling of water insoluble basic zinc stearate in water converts to water insoluble USP zinc stearate the ASTM listing. Tr. 1319–20, 13 27.

(h) Jones boiled in water both drawn and undrawn phosphated samples coated with the accused BL 235 and BL lubricants and both drawn and undrawn phosphated samples coated with BL (soap only) and the German mate He determined that a water insoluble organic compound remained

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-64, 1984–86, 1989–92. This water soluble organic compound had been formed by a reaction between the zinc phosphate and the soap (DX 383). Neither Dr. Gibson nor Mr. Leland could remove by hot water the water insoluble organic compound formed by BL 235 zinc phosphate. Tr. 2199–2202; 847–

(i) McCullough of Hooker analyzed drawn and undrawn samples of the accused BL 235 process, TD–1286–Q (no date) and the German process by the potentiometric titration method and determined that the coatings of each sample contained zinc stearate. Tr. 2107. Although he did not know the exact form of the zinc stearate, he had no doubt that the material he had found was a zinc stearate and that it was water insoluble. Tr. 2107.

(j) The uncontradicted testimony of Parker establishes that the Bonderlube 235 formula using 3% borax, 2% sodium nitrite and 95% reactive soap and applied over phosphate in an aqueous solution was developed by Parker for the specific purpose of generating in a period of a few minutes the same water insoluble zinc stearate formed by the German process over a period of 15 hours. Tr. 843–48, 2186–2204. The 3% borax served as a buffer and maintained the pH content at the desired level to enhance the reaction between the zinc phosphate and the reactive soap. Tr. 843–48, 2186–2204. The 2% sodium nitrite served as an anti-oxidative substance, Chicago Tr. 800–801, and there is no evidence that the sodium nitrite reacts or coacts with any other elements to form new compounds to perform the function of a meltable soap or organic compound.

(k) The use of 15% borax in the accused BL 246 process is in accordance with the disclosures of the prior art Bonn-Henricks patent 2,469,473, DX 1, col. 4, lines 5–19, and prior art Whitbeck patent 2,470,062, DX 3, wherein borax lubricants are used over bare metal. Whitbeck patent teaches that

from one metal forming process to another for a number of reasons, and that

(1) A higher soap content provides better lubrication at lower temperatures and a higher borax content provides better lubrication at higher pressures and higher temperatures, Col. 3, lines 11–15;

(2) The physical characteristics of the metal, the type of dies, die tolerance and clearance and surface finish and depth and complexity of the draw must be considered, Col. 3, lines 38–42;

(3) Deep draws and resultant high pressures and temperatures usually require a higher borax to soap ratio than lighter draws with lower temperatures and pressures, Col. 3, lines 45–48;

(4) The proper soap to borax ratio may be determined by a few trials with the particular dies and metal stock to be used, Col. 3, lines 62–66.

(*l*) The pattern of peaks in Curve 1 of the standard control chart DX 313–I, Curve 2 of DX 313–II and Curve 2 of DX 313–III, cannot establish the presence of barium stearate, as plaintiffs contend. Those standard charts were run on samples of Hooker or basic zinc stearate prepared by Miss Hartinger from known elements of which barium was not one. Tr. 1906–09. The same pattern of peaks occurs in the X-ray diffractometer charts of the accused coatings, DX 320, 322, 327 and PX 74, and barium is not present in those coatings. Chemical analysis of Miss Hartinger's basic zinc stearate also showed that barium is not present. Tr. 1320–21. In any event, the sample used by Dr. Cheever for the standard charts DX 313–I, II, and III, was water insoluble, as were the residues recovered from the coated workpieces after boiling in water. Tr. 1319–20.

13. Plaintiffs have not shown by a preponderance of the evidence that the accused processes left defendants with no cleaning problem. In none of the processes was it possible to remove by hot or boiling water the water insoluble organic

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(a) Alkaline cleaners were unable to remove the residue of the BL 235 in the plunger process, and a mild acid type solution (Parco 532) was necessary. Tr. 790.

(b) Hot water would not remove the residue of the BL 235 rocket process. A strong alkaline cleaner containing 20% caustic was necessary. PX 99, pp. 44–45.

(c) The BL 246 bumper process required the same multistep chemical cleaning process as the previous process using a sticky oil. PTO 10. Defendants used Wyandotte, Ferlon, McDermid and sulphuric acid cleaners, PTO 10, the same cleaners used before, and there is no indication of improvement with BL 246.

The cleanability tests performed by Dr. Rabinowicz and Friedberg would have been more persuasive if they had been able to more closely approximate operating conditions and if they had used parts deformed under heat and pressure with the lubricant thereon. Tr. 95–104, 334, 449–50, 450–57. In any event, they did not demonstrate that the films were removable without a "cleaning problem."

14. The plaintiffs have failed to prove by a preponderance of evidence that the die life was greatly increased, as discussed by the Court of Appeals of the 7th Circuit (321 F.2d at 237).

(a) As to the accused BL 246 Pontiac bumper forming process, the dies lasted the entire 1956 model run but so did the previous dies where the Marproof (sticky oil) lubricant was used. Tr. 715; PX 103, p. 39. The 1956 dies of the accused process still had to be stoned periodically to eliminate die loading and pickup so as to prevent galling and scratching of the parts, and hand polishing to eliminate scratches and scoring also was still necessary, although to a lesser degree. Tr. 694–95, 715. It was still necessary to apply tallow or grease over the dried film to aid in lubrication of areas where deep draws occurred. Tr. 708.

(b) There is no evidence that die life was increased by the accused BL 235 was machined out of solid bar stock which did not involve dies. Tr. 760-61

(c) The accused BL 235 process did not greatly increase tool and die life in the extrusion of the rocket at Pontiac. Until the time the rocket contract was canceled by the U. S. Government, the dies and punches continued to break. The BL 235 process did not prevent the breakage. Tr. 730, 750; PX 97, pp. 24-25. The rocket dies had a shorter life than the life of Pontiac's regular automobile production dies, although BL 215 was used over phosphate. Tr. 750-51

(d) In his tests plaintiffs' witness Lenz formed only 24 or 25 pieces using BL 215 (no borax) over phosphate, only 24 or 25 pieces using BL 235 over phosphate and only 24 or 25 pieces using BL 246 over phosphate. Tr. 308–09, 3 The effect of different lubricants on life can only be determined by extended periods of use wherein many thousands of pieces are used and examined. Plaintiffs' Court of Appeals Brief, page Lenz stated that one BL 215 piece had burr, one BL 235 piece had no burr and one BL 246 piece had no burr. Tr. 2 92. He did not examine the other 215, BL 235 and BL 246 pieces. Tr. 3 In the accused BL 246 process as used production, burrs were formed and to be removed in a separate operation PTO 9.

CONCLUSIONS OF LAW

Upon the foregoing findings of fact the Court concludes as a matter of law as follows:

1. The Court has jurisdiction of the parties and the subject matter of the sues raised by the pleadings of the ties herein.

[3] 2. Plaintiffs have the burden proving patent infringement by a ponderance of the evidence.

[4] 3. The construction of a claim when its validity is contested con the construction of that same claim its infringement is alleged. The pat cannot urge a restrictive in

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expansive interpretation to ensnare fringers. Devex v. General Motors, F.Supp. 17, 25 (D.Del.1967); Devex Houdaille, 382 F.2d 17, 23 (7th Cir., 67).

[5,6] 4. Plaintiffs have not shown a preponderance of the evidence that accused processes achieve the same w and unexpected results" which med the basis of the holding of valid- of Claim 4 of the Henricks patent in by the Court of Appeals for the enth Circuit.

There is no preponderance of the ence in favor of plaintiffs that in the sed processes (a) there is a new co- on between the soap, borax and phos- te, (b) new compounds or glassy rphous compounds are formed, (c) formation of water insoluble organic pounds is inhibited, (d) tool and die is greatly increased, and (e) there is leaning problem, or that any of these its is achieved. The credible evi- e is to the contrary and preponder- in favor of defendant.

Defendant's bumper forming proc- practiced at its Pontiac Motor Divi- plant during 1955 and 1956 using derlube 246 over a zinc phosphate ing formed from Spra-Bonderite X was not an infringement of Claim Henricks Patent No. Re. 24,017.

Defendant's extrusion process ticed at its Diesel Equipment Divi- plant in 1955 and 1956 in the form- of valve lifter plungers using Bond- e 235 over a zinc phosphate coating ed from Bonderite 181X was not an gement of Claim 4 of Henricks t No. Re. 24,017.

Defendant's rocket forming proc- acticed at its Pontiac Motor Divi- plant during 1952 and 1953 in rming of rocket heads and rocket bodies for the United States Gov- nt using Bonderlube 235 over a phosphate coating formed from ite 180X was not an infringe- Claim 4 of Henricks Patent No.

9. Defendant is entitled to entry of a judgment dismissing the Amended Complaint herein and awarding defendant its taxable costs on the infringement issue.

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1. Patents ⇐317

Though damages for infringeme occurring during life of patent could b awarded, injunctive relief was not a propriate where patent in issue had e pired.

2. Patents ⇐26(2)

In combining old and familiar el ments, achievement of an unexpected r sult is needed and may suffice to ma combination patentable.

3. Patents ⇐328(4)

Claim 4 of reissue patent No. 24,0 pertaining to lubricating workpiece b superimposing film of soap and bor over phosphate coating was infringed b defendant in its use of lubricating pro ess to facilitate fashioning of metal in automobile bumpers and other manufa tures.

Walter J. Blenko, Blenko, Leonard Buell, Pittsburgh, Pa. (Frederick Ziesenheim, Blenko, Leonard & Bue Pittsburgh, Pa., David F. Anderson, Po ter, Anderson & Corroon, Wilmingto Del., on the brief), for Devex Corp. a others.

George N. Hibben, Hibben, Noyes Bicknell, Chicago, Ill. (William S. Pet grew, George A. Grove, Gen. Moto Corp., Detroit, Mich., Thomas S. Lod Connolly, Bove & Lodge, Wilmingt Del., Hibben, Noyes & Bicknell, Chica Ill., Neal A. Waldrop, Harness, Dickey Pierce, Detroit, Mich., on the brief), Gen. Motors Corp.

Before HASTIE, GIBBONS and MA ROSENN, Circuit Judges.

OPINION OF THE COURT

HASTIE, Circuit Judge.

[1] In the decision, 316 F.Su 1376, from which this appeal has b taken the District Court for the Distr of Delaware held, after full hearing the merits, that a lubricating proc used by General Motors Corporati hereinafter "GM," to facilitate the f joining of metal into automobile b

DEVEX CORPORATION et al., Appellants in No. 71-1344,

v.

GENERAL MOTORS CORPORATION, Appellant in No. 71-1345.

Nos. 71-1344, 71-1345.

United States Court of Appeals, Third Circuit.

Argued June 9, 1972.

Decided Sept. 26, 1972.

Patent infringement suit. The United States District Court for the District of Delaware, Caleb M. Wright, Chief Judge, 316 F.Supp. 1376, found that patent was not infringed, and plaintiffs appealed. The Court of Appeals, Hastie, Circuit Judge, held that claim 4 of reissue patent No. 24,017 pertaining to lubricating workpiece by superimposing film of soap and borax over phosphate coating was infringed by defendant in its use of lubricating process to facilitate fashioning of metal into automobile bumpers and other manufactures.

Judgment reversed.

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ther manufactures did not infringe
n 4 of Reissue Patent No. 24,017,
d by Devex Corporation and herein-
designed as the Henricks patent.[1]
id forming operations, with which
patent is concerned, involve press-
a workpiece, the metal to be de-
d, against or between a die or dies
t it takes on a desired form. To
plish "deep" or difficult draws of
s metal great pressure must be
d, and heat is generated by the
e movement under that pressure
en the surface of the die and the
e of the workpiece. One of the
ms of the art is the lubricating of
surfaces in such a way that gall-
d scratching the workpiece and
g and otherwise damaging the
e avoided or minimized. It also is
ant that any substance that ad-
to the workpiece after drawing be
y and inexpensively removable.

im 4 of the Henricks patent dis-
a method of lubricating the work-
y "forming on the surface of the
a phosphate coating and superim-
y thereon a fixed film of a compo-
comprising a solid meltable organ-
ding material containing distrib-
herethrough a solid inorganic com-
meltable at a temperature below
lting point of the ferrous metal
ate of said coating. . . ."

ifications that were part of the
ks patent application gave exam-
f the claimed process, including
as for compositions of soap and
that would serve as the film to be
posed on the initial phosphate
of the workpiece.

x originally filed the present suit
GM and a companion suit
Houdaille Industries, Inc., anoth-
ged infringer, in the District
for the Northern District of Illi-
The two cases were consolidated for the limited purpose of adjudicating the common issue of the validity of Henricks claim 4. The court then proceeded to hold the patent invalid. On appeal, the Court of Appeals for the Seventh Circuit found claim 4 valid, though in a narrower context than its comprehensive language suggested, and remanded the cases for consideration of the issues of infringement. Devex Corp. v. General Motors Corp., 7th Cir. 1963, 321 F.2d 234.

At this point the courses of the suits against GM and Houdaille diverged. The suit against GM was removed to and decided by the District Court for the District of Delaware, and now is before us. The Houdaille case remained in the Northern District of Illinois where, on motion for summary judgment, the court decided that the defendant had infringed claim 4. On appeal that judgment was vacated and the cause remanded for full hearing on the merits. Devex Corp. v. Houdaille Industries, Inc., 7th Cir. 1967, 382 F.2d 17. We are told that the claim against Houdaille was then settled.

[2] The first Seventh Circuit appeal, contested by Devex and GM in this very suit, held, and the subsequent Houdaille appeal confirmed, that on its face claim 4 was merely a combination of old elements that were part of the prior art. However, the Court of Appeals considered and found valid the contention of Devex that, although its process was a combination of old and familiar elements, by superimposing a film of soap and borax over a phosphate coating as its above cited specifications taught, it had achieved unexpected and surprisingly favorable results that were different from what persons skilled in the art would have anticipated from this combination upon the basis of their knowledge and experience.[2]

e Patent No. 24017 has now ex-
Thus, while a court can award
s for infringement that occurred
the life of the patent, injunctive
o longer appropriate.

2. It is familiar learning that in the combining of old and familiar elements the achievement of an unexpected result is needed and may suffice to make the combination patentable.

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More particularly, in the prior art phosphate coatings had proved harmfully abrasive when subjected to great pressure in drawing. And though adding a soapy film might be expected to lessen abrasiveness, in practice such a supplement had caused the deposit of a stubborn insoluble residue that was difficult to remove from the workpiece. These circumstances considered, the court found that, as claimed by the inventor,[3] the Henricks combination of a soap and borax film over a phosphate coating solved both of these problems by interacting under the pressure and resultant heat of drawing to form substances that minimized abrasion during the drawing and at the same time inhibiting the adherence of a stubborn water insoluble film to the workpiece.

GM contends that it followed the essential teaching of a familiar prior art "German process" rather than the Henricks process. The German process taught a presoaking of a phosphate coated workpiece for as long as fifteen hours in a soap solution until chemical reaction of the constituents formed a water insoluble soapy film. Henricks, the inventor who obtained the patent in suit and now is president of Devex, admitted in this case that a workpiece lubricated by the German process "drew beautifully." But it is conceded that the firm adherence of a residual water insoluble film to the workpiece after drawing made the metal very difficult to clean. Indeed, Henricks testified that in some uses of the German process, "you can't remove it [the film] at all unless you burn it off in an annealing oven. . . ." In any event, "a seri… fect in . . . [the German proc… was that the residual deposit was … water soluble and presented a diffi… cleaning problem especially if the w… piece was to be electroplated,"[4] as w… the bumpers formed under lubricat… by the accused GM process.

In sum, early phosphate coatings, e… spongy phosphates that were soaked … wet lubricants before drawing, were … satisfactory because of their abrasi… ness. The German process minimi… abrasion and galling and thus facilita… difficult drawing, but at the same ti… it created a serious problem of clean… after drawing. Henricks disclosed … combination of soap and borax super… posed on phosphate that also provi… satisfactory lubricity, indeed super… lubricity for drawing under extr… pressure and heat, without making … drawn metal difficult to clean. Bec… Henricks was able to achieve and … imize the familiar advantages of the … ments he combined and at the same t… to eliminate disadvantages that … hampered their earlier use, the Cour… Appeals for the Seventh Circuit conc… ed that he had achieved an unexpe… result that made his combination in… tive and patentable.

The practice of GM in lubricating … metal for drawing into the shape de… for its manufactures certainly read… Henricks. Admittedly, the phosp… coating differs in no significant … from Henricks. And the superimp… soap-borax film is precisely what … ricks taught. In his specifications … ricks suggested soap and borax in…

Pacific Tea Co. v. Supermarket Equipment Co., 1950, 340 U.S. 147, 71 S.Ct. 127, 95 L.Ed. 162; Griscom-Russell Co. v. Westinghouse Electric & Mfg. Co., 3d Cir. 1941, 121 F.2d 680.

The Court of Appeals for the Seventh Circuit stated the issue it considered and resolved in this case as follows:

"Plaintiffs concede all of the elements which Henricks employed in claim 4 of the patent in suit were old per se or in other combinations and have been available in the art for some years. However, plaintiffs contend that the elements which Henricks selected w… put together in a new way and achie… a new and unexpected result." De… Corp. v. General Motors Corp., *sup…* 321 F.2d at 236.

3. In Example XIX, the Henricks pa… application specifies a "Bumper … Forming Lubricant" that can be "re… cleaned off so that no defective ni… plating will be caused by any lubric… residues."

4. Devex Corp. v. General Motors C… *supra*, 321 F.2d at 236.

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...tions of as much as four or five ...ts of borax to one of soap. Testify- ...g in this case he explained that borax ...quantities varying according to the ...ture required in particular drawing, ...ved both to improve lubricity and to ...olidify the residue which otherwise ...ld adhere to the workpiece as a hard ...emove coating.[5] The district court ...nd in this case, pursuant to the ...ement of the parties incorporated in ...retrial order, that in forming bump- ... GM used only fifteen percent borax ...h eighty-five percent soap. However, ...per forming is not an extremely ...h pressure drawing such as Henricks ...ght would require a lubricant with ...a high borax content.

...nricks did not teach and GM did ...allow the waiting period of many ...s between lubricating and drawing ...ch characterized the German process ...According to the evidence, may have ...ributed significantly, the more so in ...absence of borax, to the formation ...an insoluble residue and its stubborn ...erence to the workpiece.

...may well be that in developing his ...ss Henricks was concerned primari- ...with devising a method of lubrication ...would be effective in and could be ...ied to drawings that were more dif- ...t than the GM drawings involved in ...case. But at most this means that ...Henricks process could be adjusted ...rk satisfactorily over a wide range ...awing conditions. It does not warrant an inference that GM used some other process.

[3] Despite the above described close correspondence of GM lubricating practice with the teaching of the Henricks patent, the district court concluded that infringement was not proved because Devex failed to establish that GM achieved the unexpected results that made the Henricks combination patentable. In our view the record does not warrant that factual conclusion.

The practical measure of lubricity is the effectiveness of the lubricating process in minimizing galling of the workpiece and damage to the die during drawing. The record indicates that satisfactory lubricity, thus measured, was achieved both by the Henricks process and in the GM practice. Moreover, the German process, which GM purported to have used, was notably efficient in this regard, although tests indicated that the presence of borax, common to Henricks and GM but not taught by the German process, yielded even better lubricity at temperatures above 190°C.[6] And the depositions of GM technicians who observed or participated in the GM drawing also indicate that drawing was accomplished without serious galling or defacement of workpieces or dies. Accordingly, the district court properly found "that defendant's processes are effective, beneficial and an improvement over earlier solutions to their lubricating problems." 316 F.Supp. at 1378.

...e Court of Appeals for the Seventh ...uit held that Henricks claim 4 was ...e made invalid for vagueness by the ...t that it failed on its face to specify ...e proportions of soap and borax to be ...d. Devex Corp. v. General Motors ...p., *supra*, 321 F.2d at 238.

...ction between surfaces that slide while ...ed together is the damaging circum- ...ce that a lubricant must minimize by ...arating the adjacent surfaces. Tem- ...ature and pressure tend to cause lubri- ...nts to break down. Accordingly, the ...tive effectiveness of lubricants in a ...n environment of application is expressed by comparing their coefficients of friction in that environment. Tests introduced into this record showed that the presence of borax in lubricants for metal deforming operations was beneficial in environments hotter than 170°C. And from 190° upward Borax in increasing amounts was essential to an adequate lowering of the coefficient of friction. The GM drawings created temperatures in excess of 190°. The tests showed that both the Henricks process and the GM practice, both of which used borax, lubricated even more effectively than the German process at temperatures in excess of 190°.

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It follows that if, as GM claims, its practice did not achieve the essential and characterizing results that made the Henricks disclosure patentable, its shortcoming must have been a failure to achieve easy cleanability in conjunction with the satisfactory lubricity that it did achieve.

The most important single item we find in this long record on the issue of cleanability appears, with the express approval of the opposing parties, as an admitted fact in the district court's detailed Pre-Trial Order. That order states categorically that GM experienced "no cleaning problem with either the accused process or with the lubricant "Mar-Proof," described merely as a "sticky oil," which GM used without an underlying phosphate coating before adopting the accused practice. However, the district court found that the accused practice created a "cleaning problem" because its use had to be followed by the same cleaning procedures that were used with Mar-Proof. But it is clear that, whatever the lubricant used, the workpiece requires cleaning after drawing. And when, as in the case of auto bumpers, the article is to be electroplated the surface must be most thoroughly cleaned. Since GM contends that it was using the German process, the relevant comparison here is between that process, which admittedly created a difficult cleaning problem, and the GM process which, consistent with Henricks, made possible a simple and easy cleaning of the drawn workpiece. Tests introduced into this record showed significantly easier cleaning of workpieces coated in the GM manner with a lubricant that contained borax than of workpieces coated with the German process lubricant that contained no borax.

Accordingly, neither the component of the GM lubricant, the manner in which that lubricant was used, nor the lubricity and cleanability achieved by the accused practice show any significant departure from the method of lubricating taught by Henricks or the results achieved by that method.

GM has attempted to avoid this conclusion by introducing expert testimony that the chemical interactions that occurred during drawing under the pressure and heat of the accused practice were different from those reported by Henricks in particular applications of his process. However, in evaluating this line of proof it must be kept in mind that Henricks claimed a method of lubricating a metal workpiece that yielded in drawing an unexpectedly favorable conjunction of lubricity and cleanability. He did not claim any patentable discovery of a chemical reaction or compound. Indeed, it was not essential to the patentability of the Henricks combination that he describe or even understand any chemical reactions that made it work better than other lubricating methods. In brief, a showing that like or different chemical reactions occur in the course of drawings utilizing allegedly different lubricating methods may suggest inferentially that the results yielded by the methods are or are not equivalent. But if it is directly determinable that the two lubricants have essentially the same components, are applied in the same way and that the results of their use are essentially the same, the disputation of chemists about the chemical interactions that occurred in the processes cannot be decisive.

Moreover, it may well be that chemical reactions differed in degree, and perhaps in kind as well, in different applications of the Henricks process. Cla

7. Diamond Rubber Co. v. Consolidated Tire Co. (1911), 220 U.S. 428, 31 S.Ct. 444, 55 L.Ed. 527; Crozier-Straub, Inc. v. Graham, 3d Cir. 1928, 28 F.2d 321.

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4, even as restricted and held valid in the Seventh Circuit, covers and protects the combination of soap and borax in proportions to be varied according to the nature and difficulty of the draw to be facilitated so that the process will yield its claimed advantages over a wide range of drawing pressures and temperatures. It is not claimed that in every Henricks mix under every temperature, chemical reaction and its products will be identical. Thus, if one accepts as persuasive the testimony of GM experts that reactions and substances produced during the GM drawings were not identical with those that the Henricks process is said to have produced using different proportions of ingredients under different pressures at different temperatures, it does not follow that GM practice failed to produce the results that made the Henricks process patentable.

In these circumstances, the demonstrated effectiveness of GM practice in producing the satisfactory drawing and ease of cleaning that Henricks had achieved must prevail over any contrary inference drawn from disputed expert testimony as to comparative chemistry in what may well not have been equivalent situations.

By its cross appeal GM challenges that part of the judgment of the district court which held that the decision of the Court of Appeals for the Seventh Circuit, sustaining the Henricks patent as valid in a stated limited context, was binding upon GM. The legal basis of this challenge is a contention that venue was lacking in the Northern District of Illinois where suit was instituted. The court below held that GM had waived its objection to venue. For the reasons fully and clearly stated in the district court's opinion, Devex Corp. v. General Motors Corp., D.Del.1967, 263 F.Supp. 17, we sustain that holding.

The judgment will be reversed.

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UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

NOS. 71-1344 AND 71-1345

DEVEX CORPORATION, TECHNOGRAPH, INC., WILLIAM C. McCOY, THEODORE A. Te GROTENHUIS, FREDERICK B. ZIESENHEIM, MARJORIE Te GROTENHUIS, WILLIAM C. McCOY, JR., and KATHERINE M. BASSETT,
Appellants in No. 71-1344

vs.

GENERAL MOTORS CORPORATION,
Appellant in No. 71-1345

(D. C. Civil Action No. 3058)

ON APPEAL FROM THE
UNITED STATES DISTRICT COURT FOR THE
..... DISTRICT OF DELAWARE

Present: HASTIE, GIBBONS and ROSENN, Circuit Judges

JUDGMENT

This cause came on to be heard on the record from the United States District Court for the ..... District of Delaware and was argued by counsel.

On consideration whereof, it is now here ordered and adjudged by this Court that the judgment of the said District Court, filed January 13, 1971, be, and the same is hereby reversed as to that portion of the said judgment which held that the defendant had not infringed Claim 4 of Re-

issue Patent No. 24,017, which holding is the subject of the principal appeal herein at our No. 71-1344; as to that portion of the said judgment which held that the decision of the Court of Appeals for the Seventh Circuit, sustaining the Henricks patent as valid in a stated limited context, was binding upon GM, it is further ordered that said portion of said judgment be and hereby is affirmed, all in accordance with the opinion of this Court. Costs taxed in favor of appellants in No. 71-1344 and in favor of appellee in No. 71-1345.

ATTEST:

THOMAS F. QUINN
Clerk

September 26, 1972

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

NOS. 71-1344 AND 71-1345

DEVEX CORPORATION, TECHNOGRAPH, INC., WILLIAM C. McCOY, THEODORE A. Te GROTENHUIS, FREDERICK B. ZIESENHEIM, MARJORIE Te GROTENHUIS, WILLIAM C. McCOY, JR., and KATHERINE M. BASSETT,

vs.

GENERAL MOTORS CORPORATION,

Appellant.

SUR PETITION FOR REHEARING

Present: SEITZ, *Chief Judge;* and HASTIE, ALDISERT, GIBBONS *and* M. ROSENN, Circuit Judges.

The petition for rehearing filed by GENERAL MOTORS CORPORATION, *Appellant,*
in the above entitled case having been submitted to the judges who participated in the decision of this court and to all other available circuit judges of the circuit in regular active service, and no judge who concurred in the decision having asked for rehearing, and a majority of the circuit judges of the circuit in regular active service not having voted for rehearing by the court in banc, the petition for rehearing is denied.

By the Court,

COLLINS J. SEITZ
Chief Judge

Dated: November 29, 1972